EXHIBIT 14

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

Before the Honorable Charles E. Bullock
Chief Administrative Law Judge

In the Matter of **CERTAIN AUDIO PLAYERS AND CONTROLLERS, COMPONENTS THEREOF, AND PRODUCTS CONTAINING THE SAME**	**Investigation No. 337-TA-1191**

COMMISSION INVESTIGATIVE STAFF'S
INITIAL _MARKMAN_ BRIEF

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ABBREVIATIONS

Sonos	Complainant Sonos, Inc.
Google	Respondents Google LLC and Alphabet Inc.
Sonos Initial *Markman* Brief	EDIS Doc. ID 713881
Google Initial *Markman* Brief	EDIS Doc. ID 713880
Complaint	EDIS Doc. ID 698562
POSITA	Person of Ordinary Skill in the Art
Reb.	Rebuttal
Decl.	Declaration

EXHIBIT LIST

Staff Exhibit No.	Description
1	List of Asserted Claims
2	List of Agreed-Upon Constructions
3	Excerpts of Exhibit 12 (*Wireless Home Networking for Dummies*) to Deposition of Dr. Jon B. Weissman
4	Excerpts from Deposition Transcript of Dr. Jon B. Weissman

I.   INTRODUCTION

Pursuant to Order No. 13 (June 11, 2020) and the Ground Rules in this Investigation, the Commission Investigative Staff ("Staff") respectfully submits this Initial *Markman* Brief.

The evidentiary hearing, which is scheduled to commence on February 22, 2021, and to conclude no later than February 26, 2021, will determine whether there is a violation of Section 337 by reason of the importation and sale of certain audio players and controllers, components thereof, and products containing the same that infringe of one or more claims of: (i) U.S. Patent No. 9,195,258 ("the '258 patent"); (ii) U.S. Patent No. 10,209,953 ("the '953 patent"); (iii) U.S. Patent No. 9,219,959 ("the '959 patent"); (iv) U.S. Patent No. 8,588,949 ("the '949 patent"); and (v) U.S. Patent No. 10,439,896 ("the '896 patent") (collectively "the Asserted Patents").

The parties dispute the proper meaning of several claim terms in the Asserted Patents. On July 2, 2020, Complainant Sonos, Inc. ("Sonos") submitted its Opening Claim Construction Brief. *See* EDIS Doc. ID 713881 ("Sonos Initial *Markman* Brief"). On the same day, Respondents Google LLC and Alphabet Inc. (collectively, "Google") submitted their Initial *Markman* Brief. *See* EDIS Doc. ID 713880 ("Google Initial *Markman* Brief).

 For the reasons discussed below, the Staff submits that its proposed constructions for these disputed claim terms are most consistent with the intrinsic evidence (and pertinent extrinsic evidence) and, therefore, should be adopted by the Chief Administrative Law Judge ("CALJ").

II.   LEGAL STANDARDS

Claim construction is a question of law. *See, e.g., Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). Claim construction begins with the language of the claims. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996); *Catalina Marketing Int'l., Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 807 (Fed. Cir.

2002); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005). Proper construction of the

claims is done from the perspective of a person of ordinary skill in the field of the invention, who

is deemed to read the words in the patent with an understanding of their meaning in the field, and

to have knowledge of any special usage of the words in the field. *See, e.g., On Demand Machine*

Corp. v. Ingram, 442 F.3d 1331, 1338 (Fed. Cir. 2006). There is a heavy presumption that claim

language carries its plain and ordinary meaning. *See*, *e.g.*, *Phillips*, 415 F.3d at 1316 ("The plain

meaning of claim language ordinarily controls unless the patentee acts as his own lexicographer

and provides a special definition for a particular claim term or the patentee disavows the ordinary

scope of a claim term either in the specification or during prosecution.").

In other cases, claim terms have a specialized meaning and it is necessary to determine

what a person of ordinary skill in the art would have understood the disputed claim language to

mean by analyzing "the words of the claims themselves, the remainder of the specification, the

prosecution history, and extrinsic evidence concerning relevant scientific principles, as well as

the meaning of technical terms, and the state of the art." *Id*. (quoting *Innova/Pure Water, Inc. v.*

Safari Water Filtration Sys., Inc., 381 F.3d 1111, 1116 (Fed. Cir. 2004)); *Douglas Dynamics,*

LLC v. Buyers Prods. Co., 717 F.3d 1336, 1342 (Fed. Cir. 2013). The specification is the "single

best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1321. But "[w]hile claim

terms are understood in light of the specification, a claim construction must not import

limitations from the specification into the claims." *Deere & Co. v. Bush Hog, LLC*, 703 F.3d

1349, 1354 (Fed. Cir. 2012) (citing *Phillips*, 415 F.3d at 1323); *Varco, L.P. v. Pason Sys. USA*

Corp., 436 F.3d 1368, 1372-73 (Fed. Cir. 2006).

The prosecution history may also explain the meaning of claim language, although "it

often lacks the clarity of the specification and thus is less useful for claim construction

purposes." *Phillips*, 415 F.3d at 1317; *see also Chimie v. PPG Indus., Inc.*, 402 F.3d 1371, 1384 (Fed. Cir. 2005) ("The purpose of consulting the prosecution history in construing a claim is to exclude any interpretation that was disclaimed during prosecution."). A prosecution disclaimer only occurs if there has been a disavowal that is both "clear and unmistakable." *Sandisk Corp. v. Memorex Prods, Inc.*, 415 F.3d 1278, 1286 (Fed. Cir. 2006).

Extrinsic evidence may also be considered, if needed, to assist in determining the meaning or scope of technical terms in the claims. *Phillips*, 415 F.3d at 1317–18; *Vitronics*, 90 F.3d at 1582–83; *Markman*, 52 F.3d at 979. Expert testimony may be useful to "provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Phillips*, 415 F.3d at 1318. However, expert testimony that is at odds with the intrinsic evidence must be disregarded. *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1361 (Fed. Cir. 2005).

III.   LEVEL OF ORDINARY SKILL IN THE ART

To determine what a patent reveals to "one of ordinary skill" in the relevant art, one must first determine the appropriate level of skill that such a person would possess. *See, e.g., Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc); *see also Graham v. John Deere Co.,* 383 U.S. 1, 17-18 (1966). Factors to consider include the "type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field." *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (*citing Custom Accessories, Inc. v. Jeffrey-Allan*

Indus., Inc., 807 F.2d 955, 962 (Fed. Cir. 1986)). Not all factors need be present, and one or more factors may predominate in a given case. *Id.*

The private parties have offered slightly different views on the proper level of ordinary skill in the art of the Asserted Patents:

Sonos' Proposal:	A POSITA would have had "the equivalent of a four-year degree from an accredited institution (typically denoted as a B.S. degree) in computer science, computer engineering, electrical engineering, or an equivalent thereof, and approximately 2-4 years of professional experience in the fields of networking and network-based systems or applications, such as consumer audio systems, or an equivalent level of skill, knowledge, and experience."
Google's Proposal:	A POSITA would have had "the equivalent of a four year degree from an accredited institution (typically denoted as a B.S. degree) in computer science, computer engineering, electrical engineering, or an equivalent thereof, and approximately 4 years of professional experience in the fields of networking and network-based systems or applications, such as consumer audio systems, or an equivalent level of skill, knowledge, and experience. A person with slightly less technical education but slightly more practical experience, or more technical education (*e.g.,* a Master degree in the same fields) but less practical experience (*e.g.,* 2 years), could have met that standard."

See, e.g., Sonos Initial *Markman* Brief at 8, fn. 4; *see also* Google Initial *Markman* Brief, Ex. 9 (Reb. Shoemake Decl.) at ¶ 15.

The Staff agrees with Sonos' proposed level of ordinary skill in the art because it requires slightly less experience. The parties appear to agree, however, that the differences in their proposed level of ordinary skill in the art are not material to claim construction. *See, e.g.,* Sonos Initial *Markman* Brief at 8, fn. 4; *see also* Google Initial *Markman* Brief, Ex. 9 (Reb. Shoemake Decl.) at ¶ 17; *id.*, Ex. 7 (Jeffay Decl.) at ¶ 51; *id.*, Ex. 8 (Rinard Decl.) at ¶ 36.

IV.   U.S. PATENT NO. 9,195,258

A.   Background and Overview of the Patent

The '258 Patent, entitled "System and Method for Synchronizing Operations Among A

Plurality of Independently Clocked Digital Data Processing Devices," issued on November 24,

2015. *See* Complaint, Ex. 1. The '258 Patent issued from U.S. Application No. 14/184,935,

filed on February 20, 2014. *Id.* The '258 patent claims priority to Provisional App. No.

60/490,768, filed July 28, 2003. *Id.* The named inventor is Nicholas A.J. Millington. *Id.*

The '258 Patent was assigned to Sonos. *Id.*; *see also* Complaint, Ex. 9. A certificate of

correction for the '258 Patent issued on November 24, 2015. *See* Complaint, Ex. 2. According

to Sonos, the '258 Patent will expire on April 1, 2024. *See* Complaint, ¶ 52. The '258 Patent has

a total of 26 claims, of which independent claim 17 and dependent claims 21-24 and 26 are

asserted.

Independent claim 17 of the '258 Patent, with the first instance of each disputed claim

term highlighted in **bold**, reads as follows:

Claim 17	
Claim Element	**Claim Language**
Preamble	17. A first zone player comprising:
Element 17A	a network interface configured to interface the first zone player with at least a **local area network (LAN)**;
Element 17B	a device clock configured to generate clock time information for the first zone player;
Element 17C	one or more processors; and
Element 17D	a tangible, non-transitory computer-readable memory having instructions stored thereon that, when executed by the one or more processors, cause the first zone player to:
Element 17E	receive control information from any one of a plurality of controllers over the LAN via the network interface, wherein the received control information comprises a direction for the first zone player to enter into a synchrony group with at least a second zone player;
Element 17F	in response to the direction, enter into the synchrony group with the second zone player,
Element 17G	wherein in the synchrony group, the first and second zone players arc configured to playback audio in synchrony based at least in part on (i) audio content, (ii) playback timing information associated with the

	audio content, wherein the playback timing information is generated by one of the first or second zone players, and (iii) clock time information for the one of the first or second zone players, and wherein the generated playback timing information and the clock time information are transmitted from the one of the first or second zone players to the other of the first or second zone players, wherein the first and second zone players remain independently clocked while playing back audio in synchrony; and
Element 17H	transmit status information to at least one of the plurality of controllers over the LAN via the network interface, wherein the status information comprises an indication of a status of the synchrony group.

See also Staff Ex. 1 at 1-3 (listing each of the asserted claims of the '258 Patent).

B.   Agreed-Upon Constructions

The parties agree on the meaning of several terms in the asserted claims of the '258

Patent. These terms are listed in the attached Staff's Exhibit 2.

C.   Discussion of the Disputed Claim Terms

The parties dispute the meaning of the term "local area network (LAN)" in the '258

Patent. *See* Sonos Initial *Markman* Brief at 13-22; *see also* Google Initial *Markman* Brief at 3-8.

1.   "local area network (LAN)"

The parties offer the following claim constructions for the above-identified term:

"local area network (LAN)"		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
"data network that links devices within a limited area, such as a home or office"	Plain and ordinary meaning; no construction necessary	Plain and ordinary meaning; no construction necessary

a.   The Term Should Be Given Its Plain and Ordinary Meaning

The parties appear to agree that the term "local area network (LAN)" should be given its

plain and ordinary meaning. *See* Sonos Initial *Markman* Brief at 14; *see also* Google Initial

Markman Brief at 4. This term would have had a well understood meaning to one of ordinary

skill in the art. *See, e.g.,* Google Initial *Markman* Brief, Ex. 9 (Reb. Shoemake Decl.) at ¶ 18

(describing the plain and ordinary meaning of LAN as "a network that allows for communication

amongst two or more devices in a geographically limited area (generally one building or a group

of buildings)."). Moreover, as discussed in Section IV.C.1.b below, the specification is

consistent with the plain and ordinary meaning.

Yet, Sonos than proceeds to argue that "in the context of the Assert[ed] Patents" the

meaning of the term "local area network (LAN)" should be limited to a "data network…for

transferring digital data packets between networked devices."[1] *See* Sonos Initial *Markman* Brief

at 13-14. Sonos' overly narrow construction is inconsistent with the intrinsic evidence (and

pertinent extrinsic evidence) and, therefore, should be rejected by the CALJ. *See, e.g., Phillips*,

415 F.3d at 1316.

> **b.   Sonos' Construction Is Not Supported by the Intrinsic Evidence**

The asserted claims of the '258 Patent require, in relevant part, "a network interface

configured to interface the first zone player with at least a local area network (LAN)." *See*

Complaint, Ex. 1 at Claim 17. The claims further require: (i) "receiv[ing] control information

from any one of a plurality of controllers over the LAN via the network interface;" and (ii)

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[1] Sonos incorrectly states that Google and the Staff dispute whether the plain and ordinary meaning of "local area network" can constitute a "data network." *See*, *e.g.,* Sonos Initial *Markman* Brief at 14. The Staff (and Google) would not object to describing the LAN as a "data network" if it was understood to be simply a network that communicates data. *See* Google Initial *Markman* Brief at 5 ("While Respondents do not object to Sonos' addition of the term 'data' in front of 'network' (because 'data networks' are simply networks that communicate data), the narrower specialized meaning that Sonos attempts to further insert—via its experts Drs. Almeroth and Weissman—to 'data network' is both improper (because it attempts to construe Sonos' own construction) and incorrect (because it injects restrictions into 'LAN' far past its plain and ordinary meaning)."). Thus, the key dispute amongst the parties is whether "data network" is limited to a network for transferring "digital data packets" between networked devices.

"transmit[ting] status information to at least one of the plurality of controllers over the LAN via the network interface." *Id.* Notably, the claims of the '258 Patent do not contain the terms "digital" or "packet[s]." *See* Complaint, Ex. 1. Thus, irrespective of whether the "local area network (LAN)" is a "data network," the plain language of the claims does not support limiting the term "local area network (LAN)" to a "data network…for transferring digital data packets between networked devices."

Instead, Sonos argues that the specification of the '258 Patent "repeatedly and consistently describe[es] that the 'local network' transfers 'digital' data 'packets.'" *See* Sonos Initial *Markman* Brief at 18-21. As an initial matter, Sonos' improper attempts to read particular examples and embodiments discussed in the specification into the claims as limitations should be rejected by the CALJ. *See, e.g., Tate Access Floors, Inc. v. Maxcess Techs., Inc.*, 222 F.3d 958, 966 (Fed. Cir. 2000) ("Although claims must be read in light of the specification of which they are a part, it is improper to read limitations from the written description into a claim.") (internal citations omitted)); *Varco, L.P. v. Pason Sys. Corp.*, 436 F.3d 1368, 1373 (Fed. Cir. 2006).

Furthermore, the specification of the '258 Patent does not restrict the scope of the term "local area network (LAN)" to a "data network…for transferring digital data packets between networked devices," as Sonos contends. For example, Figure 1 depicts an illustrative network audio system 10 constructed in accordance with the invention of the '258 Patent. *See* Complaint, Ex. 1 at 3:49-50, Fig. 1. The network audio system in Figure 1 includes "a plurality of zone players 11(1) through 11(N)" that are "interconnected by a local network 12." *Id.* at 3:50-56. The "zone players 11(*n*) may also be connected to one or more audio information sources" identified by the "reference numeral 14(*n*)(*s*)." *Id.* at 3:56-61. In addition, the "network audio system 10 may include one or more audio information sources 16(1) through 16(M) connected

through appropriate network interface devices…to the local network 12." *Id.* at 4:10-14.

The "audio information sources 14(*n*)(*s*) and 16(*m*) may be any of a number of types of conventional sources of audio information, including, for example, compact disc ("CD") players, AM and/or FM radio receivers, ***analog*** or digital tape cassette players, ***analog*** record turntables and the like." *Id.* at 4:51-55 (emphasis added). The specification further explains that "the audio information sources 14(*n*)(*s*) and 16(*m*) provide audio information associated with audio programs to the zone players for playback," and that "[a] zone player that receives audio information from an audio information source 14(*n*)(*s*)…can provide playback and/or forward the audio information…over the local network 12 to other zone players for playback." *Id.* at 5:10-17. Similarly, the specification teaches that "each audio information source 16(*m*) that is not directly connected to a zone player can transmit audio information over the network 12 to any zone player 11(*n*) for playback." *Id.* at 5:17-20.

These references in the specification to analog sources of audio information—and to the transmission of audio information from those sources over the "local network 12"—contradicts Sonos' contention that the term "local area network (LAN)" in the '258 Patent is limited to a "data network…for transferring digital data packets between networked devices."

Accordingly, Sonos' proposed construction is inconsistent with the intrinsic evidence, improperly limits the claim language, and should be rejected by the CALJ.

c.   Sonos' Construction Is Inconsistent with the Pertinent Extrinsic Evidence

The extrinsic evidence cited by both Sonos and Google consistently indicates that the plain and ordinary meaning of "local area network (LAN)" refers to a network that spans a limited geographical area. *See* Sonos Initial *Markman* Brief at 21-22 (*"Modern Dictionary of Electronics* (Appendix B to Weissman and Almeroth Decls.) defining 'local area network' as '[a]

data communications network *spanning a limited geographical area*, such as an office, an entire

building, or industrial park.'"); *id.* ("*The Telecommunications Illustrated* (Appendix C to

Weissman and Almeroth Decls.) defining 'local area network' as "[a] computer network *within a*

specified geographical space, such as a building or region, or within an institutional entity such

as a classroom or department.'"); *id.* ("*Webster's New World Telecom Dictionary* (Appendix E

to Weissman and Almeroth Decls.) defining 'local area network' as "a packet network designed

to interconnect host computers, peripherals, storage devices, and other computing resources

within a local area, i.e., limited distance.'"); *id.* ("*Packet Broadband Network Handbook*

(Appendix F to Weissman Decl. and Appendix D to Almeroth Decl.) defining 'local area

network' as 'a highspeed data network *that covers a relatively small geographic area*.'")

(emphasis changed from original); *id.* at Ex. 9 (Weissman Decl.); *id.* at Ex. 10 (Almeroth Decl.);

see also Google Initial *Markman* Brief at 4-5 ("*Webster's New World Computer Dictionary*, *10th*

Edition (2003) (defining LAN as "[a] computer network that uses cables or radio signals to link

two or more computers *in a geographically limited area* (generally one building or a group of

buildings)."); *id.* at Ex. 9 (Shoemake Reb. Decl.).

None of the technical dictionary definitions cited by Sonos and Google explicitly limit

the local area network to a "data network…for transferring digital data packets between

networked devices." *Id.* Accordingly, Sonos' proposed construction is also inconsistent with the

pertinent extrinsic evidence and should be rejected by the CALJ.

V.   U.S. PATENT NO. 10,209,953

A.   Background and Overview of the Patent

The '953 Patent, entitled "Playback Device," issued on February 19, 2019. *See*

Complaint, Ex. 3. The '953 Patent issued from U.S. Application No. 16/119,638, filed on

August 31, 2018. *Id.* The '953 Patent claims priority to Provisional App. No. 60/490,768, filed July 28, 2003. *Id.* The named inventor is Nicholas A.J. Millington. *Id.* The '953 Patent was assigned to Sonos. *Id.*; *see also* Complaint, Exs. 13-14. A certificate of correction for the '953 Patent issued on December 31, 2019. *See* Sonos Initial *Markman* Brief, Ex. 4. According to Sonos, the '953 Patent will expire on April 1, 2024. *See* Complaint, ¶ 62. The '953 Patent has a total of 30 claims, of which independent claim 7 and dependent claims 12-14 and 22-24 are asserted.

Independent claim 7 of the '953 Patent, with the first instance of each disputed claim term highlighted in **bold**, read as follows:

Claim 7	
Claim Element	***Claim Language***
Preamble	7. A first zone player comprising:
Element 7A	a network interface that is configured to provide an interconnection with at least one data network;
Element 7B	a clock that is configured to provide a clock time of the first zone player;
Element 7C	at least one processor;
Element 7D	a tangible, non-transitory computer-readable medium; and
Element 7E	program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor to cause the first zone player to perform functions comprising:
Element 7F	receiving a request to enter into a synchrony group with at least a second zone player that is communicatively coupled with the first zone player over a **local area network (LAN)**;
Element 7G	in response to receiving the request to enter into the synchrony group, entering into the synchrony group with the second zone player, wherein the first zone player is selected to begin operating as a slave of the synchrony group and the second zone player is selected to begin operating as a master of the synchrony group, and wherein the clock time of the first zone player differs from a clock time of the second zone player;
Element 7H	after beginning to operate as the slave of the synchrony group:

Element 7I	receiving, from the second zone player over the LAN, clock timing information that comprises at least one reading of the clock time of the second zone player;
Element 7J	based on the received clock timing information, determining a differential between the clock time of the first zone player and the clock time of the second zone player;
Element 7K	receiving, from the second zone player over the LAN, (a) audio information for at least a first audio track and (b) playback timing information associated with the audio information for the first audio track that comprises an indicator of a first future time, relative to the clock time of the second zone player, at which the first and second zone players are to initiate synchronous playback of the audio information for the first audio track;
Element 7L	updating the first future time to account for the determined differential between the clock time of the first zone player and the clock time of the second zone player; and
Element 7M	when the clock time of the first zone player reaches the updated first future time, initiating synchronous playback of the received audio information with the second zone player.

See also Staff Ex. 1 at 4-6 (listing each of the asserted claims of the '953 Patent).

B.   Agreed-Upon Constructions

The parties agree on the meaning of several terms in the asserted claims of the '258 Patent. These terms are listed in the attached Staff's Exhibit 2.

C.   Discussion of the Disputed Claim Terms

Like the '258 Patent, the parties dispute the meaning of the term "local area network (LAN)" in the '953 Patent. *See* Sonos Initial *Markman* Brief at 13-22; *see also* Google Initial *Markman* Brief at 3-8.

1.   "local area network (LAN)"

Like the '258 Patent, the claims of the '953 Patent do not contain the terms "digital" or "packet." *See* Complaint, Ex. 3. Rather, the asserted claims of the '953 Patent require, in relevant part, "at least a second zone player that is communicatively coupled with the first zone player over a local area network (LAN)" and "receiving…over the LAN" such information as:

(i) "clock timing information;" (ii) "audio information for at least a first audio track and…playback timing information;" (iii) "a command to adjust an individual volume;" and (iv) "control information." *See* Complaint, Ex. 3 at Claims 7, 22, 23. Thus, irrespective of whether the "local area network (LAN)" is a "data network," the plain language of the claims does not support limiting the term "local area network (LAN)" to a "data network…for transferring digital data packets between networked devices."

Furthermore, the specification of the '953 Patent is the same as the specification for the '258 Patent. *See* Complaint, Exs. 1 and 3. Thus, for the same reasons set forth above in Section IV.C.1, the specification does not restrict the scope of the term "local area network (LAN)" to transferring only "digital data packets" between devices.

Accordingly, for the reason set forth above and in Section IV.C.1, the Staff submits that Sonos' improperly narrow construction should be rejected by the CALJ. Instead, the Staff submits that the term "local area network (LAN)" in the '953 Patent should be given its plain and ordinary meaning.

VI. U.S. PATENT NO. 9,219,959

A. Background and Overview of the Patent

The '959 Patent, entitled "Multi-Channel Pairing In A Media System," issued on December 22, 2015. *See* Complaint, Ex. 6. The '959 Patent issued from U.S. Application No. 14/299,847, filed on June 9, 2014. *Id.* The '959 Patent is a continuation of U.S. Application No. 13/083,499, filed on April 8, 2011. *Id.* The named inventors are Christopher Kallai, Michael Darrell, Andrew Ericson, Robert A. Lambourne, Robert Reimann, and Mark Triplett. *Id.* The '959 Patent was assigned to Sonos. *Id.*; *see also* Complaint, Ex. 11. An *Ex Parte* Reexamination Certificate for the '959 Patent issued on April 5, 2017, in response to

Reexamination Request No. 90/013,756 (filed May 25, 2016). *See* Complaint, Ex. 7. As a result

of reexamination: (i) original claims 1 and 14 were cancelled; (ii) claims 2-13 and 15-22 were

determined to be patentable as amended; and (iii) new claims 23-48 were added and determined

to be patentable. *Id*. According to Sonos, the '959 Patent will expire on September 11, 2027.

See Complaint, ¶ 77. The '959 Patent has a total of 48 claims, of which independent claims 5, 9,

10 and dependent claims 29 and 35 are asserted.

    Independent claim 10 of the '959 Patent, with the first instance of each disputed claim

term highlighted in **bold**, read as follows:

Claim 10[2]	
Claim Element	***Claim Language***
Preamble	10. **[**The playback device of claim 1, wherein the playback device is further configured to**]** *A playback device configured to output audio in a multi-channel listening environment, the playback device comprising:*
Element 10A	*a network interface configured to receive audio data over a network;*
Element 10B	*a plurality of speaker drivers configured to output audio based on the audio data;*
Element 10C	*one or more processors; and*
Element 10D	*tangible, non-transitory, computer readable memory comprising instructions encoded therein, wherein the instructions, when executed by the one or more processors, cause the playback device to (i) receive a signal from a controller over the network, wherein the signal comprises an instruction for the playback device to pair with one or more playback devices, (ii) process the audio data before the playback device outputs audio from the plurality of speaker drivers, (iii) determine that a **type of pairing** of the playback device comprises one of at least a **first type of pairing** or a **second type of pairing**. (iv) configure the playback device to perform a first **equalization of the audio data** before outputting audio*

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[2] The language of the asserted claims is reproduced as shown in the reexamination certificate for the '959 Patent. *See* Complaint, Ex. 7. As such, matter enclosed in heavy brackets **[ ]** appeared in the original patent, but has been deleted and is no longer a part of the patent. Whereas, matter printed in italics indicates additions made to the patent during reexamination.

	based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the first type of pairing, and (v) configure the playback device to perform a second equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the second type of pairing.

See also Staff Ex. 1 at 7-9 (listing each of the asserted claims of the '959 Patent).

B.   Agreed-Upon Constructions

The parties agree on the meaning of several terms in the asserted claims of the '959

Patent. These terms are listed in the attached Staff's Exhibit 2.

C.   Discussion of the Disputed Claim Terms

The parties dispute the meaning of two terms in the '959 Patent: (i) "equalization [of the

audio data];" and (ii) "type of pairing"/"first type of pairing"/"second type of pairing." *See* Sonos

Initial *Markman* Brief at 43-50; *see also* Google Initial *Markman* Brief at 10-21. For the reasons

set forth below, the Staff submits that its proposed constructions for these disputed claim terms are

most consistent with the intrinsic evidence (and pertinent extrinsic evidence) and, therefore, should

be adopted by the ALJ.

1.   "equalization [of the audio data]"

The parties offer the following claim constructions for the above-identified term:

"equalization [of the audio data]"		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
"modifying the output audio data by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as gain, frequency response, channel output, phase, or time delay;	"alteration of the relative strength of certain frequency ranges in the audio data by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as	"modifying the output audio data by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as gain, frequency response, channel output, phase, or time delay;

adjusting amplifier gain of the playback device; or using one or more filters"	gain, frequency response, channel output, phase, or time delay; adjusting amplifier gain of the playback device; or using one or more filters"	adjusting amplifier gain of the playback device; or using one or more filters" ***or alternatively*** "modifying the audio data by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as gain, frequency response, channel output, phase, or time delay; adjusting amplifier gain of the playback device; or using one or more filters"

The parties' dispute centers on whether "equalization" in the '959 Patent requires alteration of the relative strength of certain frequency ranges in the audio data (as Google contends). *See* Sonos Initial *Markman* Brief at 44-48; *see also* Google Initial *Markman* Brief at 10-18.

a.   The Staff's Construction Is Supported by the Intrinsic Evidence

The Staff's construction is supported by both the claim language and the specification. Specifically, the asserted claims of the '959 Patent each require "playback device" with "computer readable memory" that causes the device to "configure [itself] to perform a [first/second] equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise [the first/second] type of pairing." *See, e.g.,* Complaint, Ex. 7 at Claim 10. In addition, non-asserted dependent claims 2, 26, and 34 recited that "performing the first equalization comprises using a first type of pass filter ***to modify the audio data*** before outputting audio based on the audio data" and "performing the second equalization comprises using a second type of pass filter ***to modify***

***the audio data*.**" *Id.* at Claims 2, 26, and 34 (emphasis added). Thus, the plain language of the

claims of the '959 Patent supports the Staff's proposed construction of "modifying the output

audio data by performing one or more of the following…." and fails to support Google's

construction.

The specification of the'959 Patent is also consistent with the Staff's proposed

construction. The specification states:

> . Changing the equaliza-
> tion of the playback device might include any of: turning on
> or off (or effectively muting) one or more specific speaker
> drivers, changing the channel output of one or more speaker
> drivers, changing the frequency response of one or more
> specific speaker drivers, changing the amplifier gain of any
> particular speaker driver, changing the amplifier gain of the
> playback device as a whole.

See Complaint, Ex. 6 at 16:20-27 (emphasis added).

Similarly, the specification also describes additional adjustments that constitute

equalization:

> In certain embodiments, changing the equalization of a
> playback device (e.g., changing the equalization of one or
> more speaker drivers of the playback device) may affect fre-
> quency dependent parameters. Examples might include the
> adjustment of the strength of frequencies within the audio
> data, a phase adjustment, and time-delay adjustment. In addi-
> tion, a particular equalization may use a first type of pass
> filter, such as one that attenuates high, middle, or low frequen-
> cies, for example, while allowing other frequencies to pass
> unfiltered (or substantially unfiltered). Filters might also be
> different kinds or of a different order (e.g., first order filter,
> second order filter, third order filter, fourth order filter, and so
> on). For example, a first equalization of a playback device
> might include using a first type of pass filter to modify the
> output based on a first type of pairing and a second equaliza-
> tion of the playback device might include using a second type
> of pass filter to modify the output based on the second type of
> pairing. In this example, the first and second type of pass
> filters have one or different properties and/or behaviors, thus
> changing the equalization and sonic behavior of the device.

Id. at 16:28-47 (emphasis added). The specification's repeated use of "might" and "may" makes

clear that "equalization" is not limited to altering the relative strength of certain frequency

ranges, as Google contends. Rather, the intrinsic evidence supports the Staff's and Sonos'

proposed construction.

    b.   **The Staff's Construction Is Supported by the Pertinent
Extrinsic Evidence**

  The Staff and Sonos' proposed construction is the construction adopted by the district

court in *Sonos, Inc. v. Denon Electronics et al.*, No. 1:14-cv-01330-RGA (Jan. 12, 2017) ("the

Denon litigation"). *See* Google Initial *Markman* Brief, Ex. 17 (*Denon* Opinion) at 21-22.

  Like Google does here, the defendants in the *Denon* litigation argued that "equalization"

should be construed based on a dictionary-driven construction that focused on frequency. *See*

Google Initial *Markman* Brief, Ex. 18 (*Denon* Joint Claim Construction Brief) at 68-72.

Specifically, the parties in the *Denon* litigation proposed the following constructions:

    3. **"Equalization"**

Claim Term	Sonos Construction	D&M Construction
"equalization" ['959 Patent]	The phrase "performing a first [second] equalization" means "any of turning on or off (or effectively muting) one or more specific speaker drivers, ***changing the channel output of one or more speaker drivers***, changing the frequency response of one or more specific speaker drivers, changing the amplifier gain of any particular speaker driver, and changing the amplifier gain of the playback device as a whole."	The term "equalization" means a set of frequency-dependent or speaker-driver dependent parameters that affect a range and/or power level of frequencies within a channel.

Id. at 68. Sonos further argued, *inter alia*, in the parties' Joint Claim Construction Brief the

following:

Notably, the '959 Patent provides an express disclosure of what it means for a zone player to perform different equalizations of audio data, stating that:

> ***Changing the equalization of the playback device might include any of***: turning on or off (or effectively muting) one or more specific speaker drivers, changing the channel output of one or more speaker drivers, changing the frequency response of one or more specific speaker drivers, changing the amplifier gain of any particular speaker driver, changing the amplifier gain of the playback device as a whole.

Id. at 16:20-27 (emphasis added). Sonos's construction of the phase "performing an equalization of audio data" is taken verbatim from this disclosure. On the other hand, D&M's construction is narrower than this express disclosure and improperly excludes certain options for performing an equalization, such as "changing the channel output of one or more speaker drivers."

Id. at 69. Whereas, respondents argued, *inter alia*, the following with respect to "equalization":

> On the other hand, Defendants' proposed construction is predicated on the intrinsic evidence and the plain and ordinary meaning of the term "equalization" in the context of equalizing audio data. "Equalization" of "data" relates generally to "frequency." In fact, the IEEE's definition of "equalization" of "data transmission" relates to altering and customizing frequencies of data to match the needs of a system. *See* Jackson Dec. at Ex. 1 at 388. Moreover, the '959 Patent states that "changing the equalization of a playback device (e.g., changing the equalization of one or more speaker drivers of the playback device) *may affect frequency dependent parameters.* Examples might include the *adjustment of the strength of frequencies within the audio data*, a phase adjustment, and time-delay adjustment." *Id.* at Col. 16:28-33.

Id. at 70 (emphasis added). The district court rejected both proposed constructions finding, in relevant part, the following:

> constitutes lexicography. The specification provides that equalization "might include" the types of changes listed in Plaintiff's proposed construction. (*Id.* at 16:20-27). The specification also provides for additional adjustments that constitute equalization, including adjusting frequency strengths, phases, time delays, and the use of filters. (*Id.* at 16:28-47). For this reason, I will reject Defendants' proposed construction as too narrow. Plaintiff's proposed construction, however, simply parrots a portion of the specification and is also narrower than what is disclosed in the specification. Therefore, I will construe equalization to mean "modifying the output audio data by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as gain, frequency response, channel output, phase, or time delay; adjusting amplifier gain of the playback device; or using one or more filters."

See Google Initial *Markman* Brief, Ex. 17 (*Denon* Opinion) at 21-22.

Google's proposed construction focused on frequency should be rejected for the same reasons. Instead, the CALJ should adopt the Staff's and Sonos' proposed construction (which is the same as the district court's construction).

<div align="center">

**c.   The Staff Does Not Object to Replacing "Output Audio Data"
In Its Proposed Construction With "Audio Data"**

</div>

Google argues that the CALJ should reject the construction adopted by the *Denon* court because it uses the term "output audio data." *See* Google Initial *Markman* Brief at 18. Specifically, Google argues that the construction renders the claims ambiguous. *Id.* The Staff does not agree. However, to the extent the CALJ determines the construction creates ambiguity, the Staff believes an appropriate solution would be to construe "equalization [of the audio data]" as "modifying ***the audio data*** by performing one or more of the following: adjusting one or more parameters related to speaker drivers, such as gain, frequency response, channel output, phase, or time delay; adjusting amplifier gain of the playback device; or using one or more filters."

<div align="center">

2.   "[first/second] type of pairing"

</div>

The parties offer the following claim constructions for the above-identified term:

"type of pairing" / "first type of pairing" / "second type of pairing"		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
A "type of pairing" can be either a pairing configuration involving two or more playback devices that have different playback roles, such as a stereo pair or home theater configuration, or a 'no pairing' in which the playback device is not part of a pairing configuration involving two or more playback devices	The terms "type", "first type", and "second type" should have their plain an ordinary meaning	Plain and ordinary meaning; no construction necessary

a.   The Term Should Be Given Its Plain and Ordinary Meaning

The parties key dispute is whether a "no pairing" is a "type of pairing." *See* Sonos Initial

Markman Brief at 48-50; *see also* Google Initial *Markman* Brief at 18-21. There is no dispute

that the claim language and specification of the '959 Patent explicitly discloses that a "no

pairing" is a "type of pairing." *Id.* Rather, Google argues that judicial estoppel bars Sonos from

advancing its proposed construction. For the reasons discussed below, Google's argument is

without merit. Because the meaning of the term is readily apparent from the claim language, the

Staff submits that no construction is necessary. However, the Staff would not object to adoption

of Sonos' proposed construction.

b.   The Claim Language and the Specification Explicitly Disclose "No Pairing" As A "Type of Pairing"

The claim language of the '959 Patent explicitly discloses that a "no pairing" is a "type of

pairing." For example, nonasserted dependent claim 3 (reproduced below), which depends from

claim 10, recites "wherein the first *type of pairing comprises no pairing*….":

> 3. The playback device of claim **[1]** *10*, wherein the first type of pairing comprises no pairing with another playback device and the second type of pairing comprises pairing with one or more additional playback devices.

See Complaint, Ex. 7 at Claim 3 (emphasis added); *see also id.* at Claim 16.

Similarly, the specification explicitly describes a "no pairing" as a "type of pairing":

> Further, it is understood that going from a configuration of no pairing (unpaired or non paired) to a configuration of pairing or from one kind of pairing (e.g., a pairing used in a type of stereo mode or theater mode) to a different kind of pairing (e.g., another pairing used in a type of stereo mode or theater mode) are all various types of "pairing" that can occur according to certain embodiments. In addition, disengaging a pairing between multiple playback devices might go from pairing to no pairing or from pairing of a first kind back to pairing of a previous kind, for example.

> In one example, a first type of pairing might include "no pairing" with another playback device and a second type of pairing might include pairing with one or more additional playback devices. In a second example, a first type of pairing

See Complaint, Ex. 6 at 15:48-61.

In light of the intrinsic evidence, the plain and ordinary meaning of the terms "type of pairing," "first type of pairing," and "second type of pairing" clearly include a "no pairing," and the Staff thus submits that no construction of these terms is necessary.

c.   Judicial Estoppel Does Not Apply

Google does not dispute the explicit disclosures in the '959 Patent that a "no pairing" is a "type of pairing." *See* Google Initial *Markman* Brief at 18-21. Instead, Google argues that "judicial estoppel bars Sonos from advancing a construction of 'pairing' that is inconsistent with its position" in the *Denon* litigation. *Id.* at 21. Google's argument is without merit.

First, the term "pairing" in the '959 Patent is not the same as the term "type of pairing." Second, as shown in that attached Staff's Exhibit 2, the parties in this Investigation have agreed to construe the term "pairing" as a "configuration involving two or more playback devices that have different playback roles." *See* Staff Ex. 2 at 3. This construction for "pairing" is identical to the adopted construction in the *Denon* litigation. *See, e.g,* Google Initial *Markman* Brief at 19; *id.* at Ex. 18. Thus, contrary to Google's contention, Sonos has not "deviate[d] from the construction it advanced and won in the *Denon* litigation. *Id.* at 21. Accordingly, judicial estoppel does not apply. *See New Hampshire v. Maine,* 532 U.S. 742, 750 (2001) (listing the factors that inform the decision of whether judicial estoppel applies).[3]

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[3] The Staff also agrees with Sonos' arguments as to why construing "type of pairing" to encompass a "no pairing" is consistent with the parties' agreed construction of the term "pairing" in the '959 Patent. *See* Sonos *Initial* Markman Brief at 50.

VII.   U.S. PATENT NO. 8,588,949

A.   Background and Overview of the Patent

The '949 Patent, entitled "Method And Apparatus For Adjusting Volume Levels In A Multi-Zone System," issued on November 19, 2013. *See* Complaint, Ex. 4. The '949 Patent issued from U.S. Application No. 13/619,237, filed on September 14, 2012. *Id.* The '949 Patent claims priority to Provisional App. No. 60/490,768, filed July 28, 2003. *Id*. The named inventors are Robert A. Lambourne and Nicholas A.J. Millington. *Id.* The '949 Patent was assigned to Sonos. *Id.*; *see also* Complaint, Ex. 10. An *Ex Parte* Reexamination Certificate for the '949 Patent issued on November 5, 2015, in response to Reexamination Request No. 90/013,423 (filed January 5, 2015). *See* Complaint, Ex. 5. As a result of reexamination: (i) claims 1, 3, 4, 6, 7, 8, 10, 11, 13, 14, 15 and 17-20 were determined to be patentable as amended; and (ii) claims 2, 5, 9, 12, and 16, dependent on an amended claim, were also determined to be patentable. *Id.* According to Sonos, the '949 Patent will expire on April 1, 2024. *See* Complaint, ¶ 67. The '949 Patent has a total of 20 claims, of which independent claim 1 and dependent claims 2, 4, and 5 are asserted.

Independent claim 1 of the '949 Patent, with the first instance of each disputed claim term highlighted in **bold**, read as follows:

Claim 1[4]	
Claim Element	***Claim Language***
Preamble	1. A multimedia controller including a processor, the controller configured to:

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[4] The language of Claim 1 is reproduced as shown in the reexamination certificate for the '949 Patent. *See* Complaint, Ex. 10. As such, matter enclosed in heavy brackets **[ ]** appeared in the original patent, but has been deleted and is no longer a part of the patent. Whereas, matter printed in italics indicates additions made to the patent during reexamination.

Element 1A	provide a user interface for a player group, wherein the player group includes a plurality of players in a **local area network**, and wherein each player is an **independent playback device** configured to playback a multimedia output from a multimedia source;
Element 1B	accept via the user interface an input to facilitate formation of the player group, wherein the input to facilitate formation of the player group indicates that at least two of the plurality of players in the local area network are to be included in the player group *for synchronized playback of a multimedia output from the same multimedia source*;
Element 1C	for **[each of the plurality of players within]** *any individual player in* the player group, accept via the user interface **[an]** *a player-specific* input to adjust a volume **[associated with the]** *of that individual* player, wherein the *player-specific* input to adjust the volume **[associated with the]** *of that individual* player causes **[the corresponding independent playback device]** *that individual player* to adjust its volume; and
Element 1D	accept via the user interface **[an]** *a group-level* input to adjust a volume associated with the player group, wherein the *group-level* input to adjust the volume associated with the *player* group causes **[the corresponding independent playback devices]** *each of the players* in the player group to adjust **[their volumes]** *its respective volume*.

See also Staff Ex. 1 at 10-11 (listing each of the asserted claims of the '949 Patent).

B.   Agreed-Upon Constructions

The parties agree on the meaning of several terms in the asserted claims of the '949 Patent. These terms are listed in the attached Staff's Exhibit 2.

C.   Discussion of the Disputed Claim Terms

Like the '258 and '953 Patents, the parties dispute the meaning of the term "local area network (LAN)" in the '949 Patent. *See* Sonos Initial *Markman* Brief at 13-22; *see also* Google Initial *Markman* Brief at 3-8, 31-32. In addition, the parties dispute whether the term "independent playback device" is indefinite. *See* Sonos Initial *Markman* Brief at 36-43; *see also* Google Initial *Markman* Brief at 25-31. For the reasons set forth below, the Staff submits that its proposed constructions for these disputed claim terms are most consistent with the intrinsic evidence (and pertinent extrinsic evidence) and, therefore, should be adopted by the CALJ.

1.   "local area network (LAN)"

The parties dispute with respect to the term "local area network (LAN)" in the '949

Patent is the same as the '258 and '953 Patents. *See* Sonos Initial *Markman* Brief at 13-22; *see*

also Google Initial *Markman* Brief at 3-8, 31-32.

Like the '258 Patent and the '953 Patent, the claims of the '949 Patent do not contain the

terms "digital" or "packet." *See* Complaint, Ex. 4. Rather, the asserted claims of the '949 Patent

require, in relevant part, "a user interface for a player group, wherein the player group includes a

plurality of players in a local area network" and "accept[ing] via the user interface" various

inputs (*e.g.*, "an input to facilitate formation of the player group*,*" "a player-specific input," "a

group-level input," or "an input to remove one of the plurality of players from the player

group."). *See, e.g.,* Complaint, Ex. 4 at Claims 1 and 2. Thus, irrespective of whether the "local

area network (LAN)" is a "data network," the plain language of the claims does not support

limiting the term "local area network (LAN)" to a "data network" that transfers only "digital data

packets" between devices.

Furthermore, the specification of the '949 Patent does not restrict the scope of the term

"local area network (LAN)" to a "data network" that transfers only "digital data packets"

between devices. For example, Figure 1 depicts an exemplary configuration 100 in which the

invention of the '949 Patent may be practiced. *See* Complaint, Ex. 4 at 4:56-58, Figure 1. The

devices in Figure 1 "are coupled directly or indirectly to a data network 108." *Id.* at 5:5-18. The

specification describes that "device 112" (shown as a stereo system) "is configured to receive an

analog audio source (e.g., from broadcasting) or retrieve a digital audio source (e.g., from a

compact disk)." *Id.* at 5:25-31 (emphasis added). The specification further teaches that the

"analog audio sources ***can be*** converted to digital audio sources," and that "the audio sources

may be shared among the devices on the network 108." *Id.* (emphasis added).

These references in the specification to analog audio sources—and to sharing the audio sources among devices on the network—contradict Sonos' contention that the term "local area network (LAN)" in the '949 Patent is limited to a "data network…for transferring digital data packets between networked devices."

Accordingly, for the reasons set forth above and in Section IV.C.1, the Staff submits that Sonos' improperly narrow construction should be rejected by the CALJ. Instead, the Staff submits that the term "local area network (LAN)" in the '949 Patent should be given its plain and ordinary meaning.

2.   "independent playback device"

The parties offer the following claim constructions for the above-identified term:

"*independent playback device*"		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
"data network device configured to process and output audio that is capable of playing multimedia separately from other players"	Indefinite	"data network device configured to process and output audio that is capable of independent operation"

The parties dispute whether this term is indefinite. *See* Sonos Initial *Markman* Brief at 36-43; *see also* Google Initial *Markman* Brief at 25-31. For at least the reasons discussed below, the Staff submits that its proposed construction most accurately encompasses the capabilities of the independent playback device described in the intrinsic evidence, and thus should be adopted by the CALJ.

a.   The Staff's Construction Is Supported by the Claim Language and the Specification

The plain language of the claims supports the Staff's construction of "independent playback device" as a "data network device configured to process and output audio that is capable of independent operation." For example, Elements 1A and 1B of claim 1 recite "a player group…wherein each player is an independent playback device configured to playback a multimedia output from a multimedia source" and that "at least two of the…players…are to be included in the player group for synchronized playback of a multimedia output from the same multimedia source." Thus, Elements 1A and 1B require that the independent playback device have the capability to: (i) play back audio independently/separately from other players when ungrouped; and (ii) also have the capability to be dynamically grouped for synchronized audio playback with other players. In addition, Elements 1C and 1D of claim 1 recite a "player-specific input" and "group-level input" that cause the independent playback devices to adjust their volume. Thus, Elements 1C and 1D require that the independent playback device also has the capability of adjusting its volume based on individual and groupwise volume control.

Consistent with the Staff's construction, the specification of the '949 Patent describes "a need for dynamic control of…audio players as a group" where the audio players may be readily grouped "[w]ith a minimum manipulation," and "further a need for user interfaces that may be readily utilized to group and control the audio players." *See* Complaint, Ex. 4 at 2:13-17. The specification further describes that one aspect of the present invention provides "a configurable module…in the controlling device that provides interactive graphic user interface for ***forming, managing and controlling groups*** in the system, de-grouping a group ***or adjusting audio volume of individual players or a group of players***." *Id.* at 2:65-3:3 (emphasis added); *see also* 3:40-45 ("One of the objects, features, and advantages of the present invention is to remotely

control a plurality of multimedia players in a multi-zone system, playing and controlling the audio source synchronously if the players are grouped together, or playing and controlling the audio source individually if the players are disassociated with each other.").

The independent playback device's capability of independent operation (*e.g.*, the capability to playback multimedia separately from other players and to adjust its volume based on individual and groupwise volume control) is also described elsewhere in the specification. For example, Figure 3C shows an exemplary user interface of individual zones in a house. *Id.* at 9:49-50, Fig. 3C. The specification explains that "[e]ach zone player can play a type of media (such as music, photographs and video) independently." *Id.* at 9:49-52. Whereas, Figure 3E illustrates a "group" of zone players wherein "the user…can switch the group of players to any other type of media or a different piece of music and all of the zone players in the group will play the selected media at the same time." *Id.* at 10:7-29; Fig. 3E. In addition, Figure 5C shows a user interface to allow a user to adjust a volume level of the zone players in a zone scene individually or collectively. *Id.* at 4:18-20, 11:1-10; *see also id.* at 5:37-6:40, 6:56-60, Fig. 2A.

b.   The Staff's Construction Is Supported by the Prosecution History

During both prosecution and subsequent reexamination of the '949 Patent, the independent playback device's capability of independent operation (*e.g.*, the capability to playback multimedia separately from other players and to adjust its volume based on individual and groupwise volume control) was important in distinguishing the prior art.

The application for the '949 Patent was filed on September 14, 2012 with original claims 1-20. *See* Sonos Initial *Markman* Brief, Ex. 16 (Reb. Weissman Decl.) at *34-84. On March 23, 2013, Sonos filed a preliminary amendment that, *inter alia*, cancelled the original claims and presented new claims 21-40. *Id*. at *85-96. Independent claim 21 eventually became

claim 1 of the '949 Patent.

On April 10, 2013, the Examiner issued a Non-Final Office Action rejecting the pending

claims as anticipated and/or rendered obvious by U.S. Patent Pub. No. 2004/0131192

("Metcalf") alone or in view of U.S. Patent Pub. No. 2004/0015252 ("Aiso"). *Id*. at *97-105.

On May 29, 2013, a telephonic interview was conducted between Sonos and the Examiner,

during which "[Sonos] discussed the Metcalf reference and the Aiso reference, and argued that

those references did not disclose or suggest independent playback devices." *Id*. at *107-108,

116. On July 3, 2013, a second telephonic interview took place, during which Sonos proposed

amendments to independent claim 21 to add the "independent playback device" limitation, which

the Examiner deemed "sufficient to obviate the anticipation rejections over Metcalf and the

obviousness rejection over Metcalf in view of Aiso." *Id*. at *116, 121-123.

On July 8, 2013, Sonos filed a Response including, *inter alia*, the amendments to

independent claim 21, which are shown below:

> 21.   (currently amended) A multimedia controller including a processor, the controller
> configured to:
>
>   provide a user interface for a player group, wherein the player group includes a
> plurality of players in a local area network, and wherein each player is an independent
> playback device configured to playback a multimedia output from a multimedia source;
>
>   accept via the user interface an input to facilitate formation of the player group,
> wherein the input to facilitate formation of the player group indicates that at least two of the
> plurality of players in the local area network are to be included in the player group;
>
>   for each of the plurality of players within the player group, accept via the user
> interface an input to adjust a volume associated with the player, wherein the input to adjust
> the volume associated with the player causes the corresponding independent playback device
> player to adjust its volume; and
>
>   accept via the user interface an input to adjust a volume associated with the player
> group, wherein the input to adjust the volume associated with the group causes the
> corresponding independent playback devices players in the player group to adjust their
> volumes.

Id. at *110. Sonos explained that it "amended the claims to clarify that each player in the plurality of players is an 'independent playback device'" and argued that "the prior art of record fails to show or render obvious the recited features of the pending claims including the grouping of independent playback devices." *Id*. at *117.[5]

On August 28, 2013, Sonos and the Examiner participated in a third telephonic interview, during which the participants discussed, *inter alia*, claim 21 and U.S. Patent Pub. No. 2002/0124097 ("Isely"). *Id*. at *133, 136. The Examiner's summary of the interview states as follows:

Identification of prior art discussed: *Isley (of record)*.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Discussed support for the independent operation of the claimed individual player and Applicant distinguished the individual operation over the tethered or interdependent operation of Isley. Discussed corrections to the dependencies and language of claim 24 .

Id. at *133 (emphasis added). Sonos's summary of the interview states that "[Sonos] discussed the Isely reference and reiterated that the reference did not disclose or suggest independent playback devices." *Id*. at *136.

On September 6, 2013, the Examiner issued a Notice of Allowance in which the Examiner found the following:

3.   The following is an examiner's statement of reasons for allowance:

Applicant's amendments in concert with remarks filed 7/8/13 are persuasive. Particularly,

the prior art is enabling for an individually addressable independent playback device,

such as that depicted in Figure 2A of the instant application, functionally grouped into ad

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[5] As explained by Sonos' expert, Dr. Jon Weissman, at minimum, the audio components disclosed in Metcalf are distinctly different from the claimed "independent playback devices" because they are "all hard-wired back to a centralized 'annunciator module'" and "work together to cooperatively reproduce 'a sound event,' such as a concert or a movie." *See* Sonos *Initial Markman Brief*, Ex. 16 (Reb. Weissman Decl.) at ¶¶ 30-31.

hoc networks for designation, receipt and playback of particular audio streams in concert

with user directed characteristics such as volume (see at least Isley: 20020124097: ¶ 6,

60-64; Figure 2, 5, 6: zones are formed and volume control applied to a zone and thereby

selectively to individual zone players based on a user determined relationship). However

where Isley controls volume in an interdependent manner the instant application s teaches

the system functional to provide groupwise and individual control of each of the

groupwise addressable and independently addressable playback devices (see

Specification as filed ¶ 12 etc.) The prior art also abounds in individual and groupwise

volume control such as might be found on an audio mixer wherein individual channels

each comprise a volume adjustment such as by a fader etc. and wherein the individual

channels may be grouped onto a groupwise volume adjustment fader etc. to apply

individual and overall volume control. (see Metcalf, Aiso, ID3v2: master/group and

individual channel volume controls may be applied to streams, channels or collected

aggregates thereof). However the prior art does not reasonably link these functionalities

sufficient to operate multiple players in a room or other particular local area network

under direction of a user interface operable to perform ad hoc groupings of individual

players, to save/recall/instantiate such groups and to perform individual and groupwise

volume control over such groups.

Id. at *124-132 (emphasis added).[6] The '949 Patent issued on November 19, 2013. *See*

Complaint, Ex. 4.

On January 5, 2015, a Request for *Ex Parte* Reexamination of the '949 Patent was filed,

and the Reexamination was initiated on January 29, 2015. *See* Sonos Initial *Markman* Brief, Ex.

16 (Reb. Weissman Decl.) at *140-142. On April 22, 2015, the Examiner issued a Non-Final

Office Action in the Reexamination, rejecting claims 1-20 as anticipated by U.S. Patent No.

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[6] Cited paragraph [0012] states "According to yet another aspect of the present invention, a configurable module is implemented in the controlling device that provides interactive graphic user interface for ***forming, managing and controlling groups*** in the system, de-grouping a group ***or adjusting audio volume of individual players or a group of players***." *Id.* at *39 (emphasis added).

5,761,320 ("Farinelli"). *Id*. at *143-158.

On June 1, 2015, an interview was held during which Sonos's in-house counsel, Chris

Butts, demonstrated Sonos devices and the Sonos App. *Id*. at *161, 170-171. Sonos' summary

of the interview states in relevant part, the following:

> During the Interview, Mr. Butts conducted a demonstration involving multiple Sonos
> players[1] (i.e., independent playback devices), multiple audio sources, and a controller-provided
> user interface presented by Sonos's smartphone application. As described during the interview,
> the Sonos system includes a commercial embodiment of the claims. During the demonstration,
> Mr. Butts used the user interface to cause different respective players—which were ungrouped
> initially—to play back different audio content from different respective audio sources at the
>
> same time. Mr. Butts then used the user interface to dynamically form a player group that
> included multiple players, and then caused the players in the group to play back the same audio
> content from the same audio source in a synchronized fashion. After dynamically forming the
> player group that included multiple players, Mr. Butts first used the user interface to demonstrate
> inputs where each such input caused an individual player in the player group to adjust its
> volume. Mr. Butts then used the user interface to demonstrate a single input that caused all of the
> players in the player group to adjust their volume.

Id. at *170-171 (emphasis added) (footnote omitted).

On June 22, 2015, Sonos filed a Response to the Non-Final Office Action that put forth

reasons as to why Farinelli does not anticipate the claims of the '949 Patent. *Id*. at *163-182. In

relevant part, Sonos argued that the claimed system "is built on a network of independent

playback devices (also called 'zone players')" and that "[c]ommerical examples of such

independent playback devices…were demonstrated during the June 1 [i]interview…." *Id*. at

*172-173. Referencing Figure 1 of the '949 Patent, Sonos further explained the following:

As shown, this system includes three independent playback devices 102, 104, and 106 that are each connected to data network 108, and any of independent playback devices 102, 104, and 106 can be controlled using a controller (such as control device 140 or 142) that is also connected to network 108. The independent playback devices can play back multimedia content from an audio source via the network 108 (e.g., from device 110 or device 112) or from an audio source on the Internet. Each of independent playback devices 102, 104, and 106 can play content from a different audio source or can be dynamically grouped together to play content from the same audio source in synchrony.

The claims of the '949 patent are directed to one of Sonos's many innovations in connection with its multi-room audio system. As recited in claim 1 of the '949 patent (which is representative), a controller is configured to provide a user interface for a player group. In the

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player group, "each *player* is an independent *playback device* configured to *play back* a multimedia output *from a multimedia source*." Claim 1 then recites that the controller is configured to accept the following two different types of volume-control inputs:

1. an input to adjust a particular independent playback device's individual "player" volume, which in turn causes *that* particular independent playback device to adjust its individual "player" volume; and

2. an input to adjust a "player group" volume, which in turn causes *each* independent playback device in the player group to adjust its individual "player" volume.

As is further explained below, Sonos respectfully submits that this combination of features is not taught by the cited Farinelli reference.

Id. at *173-174 (emphasis added); *see also id.* at *171 (arguing Farinelli does not anticipate the claims of the '949 Patent because, *inter alia*, "the Office Action 'double counted' a single volume control described in Farinelli with respect to the two different claimed inputs…[for individual and groupwise volume control].").

On August 5, 2015, the Examiner issued a Final Office Action again rejecting the claims as anticipated by Farinelli. *Id.* at *184-207. On September 18, 2015, another interview was conducted during which proposed amendments were discussed that the Examiner indicated would overcome the prior art of record. *Id.* at *210-216, 224. On October 6, 2015, Sonos filed a

Response to the Final Office Action including the proposed amendments to the claims. *Id*. at

*217-226. The amendments made to claim 1 of the '949 Patent during reexamination are shown

above in Section VII.A. *See also id*. at *218.

Accordingly, both the prosecution history and reexamination of the '949 Patent supports

that Staff's construction of "independent playback device" as a "data network device configured

to process and output audio that is capable of independent operation."[7]

c.   Google Has Not Met Its Burden of Showing That the Claims Are Indefinite

Google argues that the term "independent playback device" is indefinite because claim 1

of the '949 Patent "contradictorily requires the playback device to be in two distinct states at the

same time: 'independent' and part of a 'group." *See* Google Initial *Markman* Brief at 25.

Google's argument is based on an improper interpretation of claim 1 that its own expert (Dr.

Martin Rinard) acknowledges renders the claims "internally inconsistent." *Id.*, Ex. 8 (Rinard

Decl.) at ¶¶ 37-41.

Instead, as shown above in Sections VII.C.2.a-b, when the term "independent playback

device" is properly interpreted in light of the claim language, specification and prosecution

history, the claims of the '949 Patent "inform those skilled in the art about the scope of the

invention with reasonable certainty." *Nautilus*, 572 U.S. at 910. Sonos' expert, Dr. Jon

Weissman, confirms that one of ordinary skill in the art would have understood the term

"independent playback device" in the context of the '949 Patent to refer to a playback device that

is capable of independent operation. *See* Sonos Initial *Markman* Brief, Ex. Ex. 16 (Reb.

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[7] Although the Staff's construction repeats the term "independent," the phrase "independent operation" is taken directly from the Examiner's summary of the interview discussing the "claimed individual players" as distinct from Isley. *See* Sonos *Initial* Markman Brief, Ex. 16 (Reb. Weissman Decl.) at *133.

Weissman Decl.) at ¶¶ 15-87; *see also* Staff Ex. 4 at 163:22-164:7 ("Q. Okay. And the capability

of the independent playback devices to both play multimedia separately from other players and

to play multimedia synchronously when grouped was important in overcoming the prior art

during prosecution, correct? A. My understanding is that was important to draw a distinction

with at least Metcalf."); *id.* at 165:14-20 ("Q. And the independent playback device's ability to

adjust its volume in response to individual and group-wise volume-control inputs was important

to distinguishing the prior art during prosecution, correct? A. Yes. It was important in the

distinction over Isely."). Similarly, during both prosecution and reexamination of the '949

Patent, neither Sonos, the party requesting reexamination, nor the Examiners expressed any

concerns regarding the scope of the term "independent playback device."

For at least these reasons, Google has not met its burden of showing that the term

independent playback device" renders claim 1 of the '949 Patent indefinite.

VIII.   U.S. PATENT NO. 10,439,896

A.   Background and Overview of the Patent

The '896 Patent, entitled "Playback Device Connection," issued on October 8, 2019. *See*

Complaint, Ex. 8. The '896 Patent issued from U.S. Application No. 16/298,542, filed on March

11, 2019. *Id.* The '896 Patent claims priority to Provisional App. No. 60/577,284, filed June 5,

2004. *Id.* The named inventors are Nicholas A.J. Millington and Paul V. Hainsworth. *Id.*

The '896 Patent was assigned to Sonos. *Id.*; *see also* Complaint, Ex. 12. According to Sonos,

the '896 Patent will expire on June 6, 2025. *See* Complaint, ¶ 87. The '896 Patent has a total of

20 claims, of which independent claim 1 and dependent claims 3, 5, 6, and 12 are asserted.

Independent claim 1 of the '896 Patent, with the first instance of each disputed claim

term highlighted in **bold**, reads as follows:

Claim 1	
Claim Element	**Claim Language**
Preamble	1. A computing device comprising:
Element 1A	a user interface;
Element 1B	a network interface;
Element 1C	at least one processor;
Element 1D	a non-transitory computer-readable medium; and
Element 1E	**program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:**
Element 1F	**while operating on a secure wireless local area network (WLAN) that is defined by an access point, (a) receiving, via a graphical user interface (GUI) associated with an application for controlling one or more playback devices, user input indicating that a user wishes to set up a playback device to operate on the secure WLAN and (b) receiving a first message indicating that a given playback device is available for setup;**
Element 1G	after receiving the user input and receiving the first message, transmitting a response to the first message that facilitates establishing an initial communication path with the given playback device, wherein the initial communication path with the given playback device does not traverse the access point;
Element 1H	transmitting, to the given playback device via the initial communication path, **at least a second message containing network configuration parameters, wherein the network configuration parameters comprise an identifier of the secure WLAN and a security key for the secure WLAN;**
Element 1I	after transmitting at least the second message containing the network configuration parameters, detecting an indication that the given playback device has successfully received the network configuration parameters; and
Element 1J	after detecting the indication, transitioning from communicating with the given playback device via the initial communication path to communicating with the given playback device via the secure WLAN that is defined by the access point.

See also Staff Ex. 1 at 12-13 (listing each of the asserted claims of the '896 Patent).

B.   **Agreed-Upon Constructions**

The parties agree on the meaning of several terms in the asserted claims of the '896

Patent. These terms are listed in the attached Staff's Exhibit 2.

C.   **Discussion of the Disputed Claim Terms**

The parties dispute five terms in the '896 Patent. *See* Sonos Initial *Markman* Brief at 13-

36; *see also* Google Initial *Markman* Brief at 32-50. For the reasons set forth below, the Staff

submits that its proposed constructions for these disputed claim terms are most consistent with

the intrinsic evidence (and pertinent extrinsic evidence) and, therefore, should be adopted by the

CALJ.

1.   **"wireless local area network (WLAN)"**

The parties dispute with respect to the term "wireless local area network (WLAN)" in

the '896 Patent is the same as their dispute regarding the meaning of the term "local area

network (LAN)" in the '258, '953, and '949 Patents. *See* Sonos Initial *Markman* Brief at 13-22;

see also Google Initial *Markman* Brief at 3-8, 49-50.

Like the '258, '953, and '949 Patents, the claims of the '896 Patent do not contain the

terms "digital" or "packet." *See* Complaint, Ex. 8. Rather, the asserted claims of the '896 Patent

require, in relevant part, "operating on a secure wireless local area network (WLAN) that is

defined by an access point" and "communicating with the given playback device via the secure

WLAN" to: (i) "transmit[] a command to the given playback device related to playback of audio

content;" or (ii) "transmit[] a command to the given playback device to form a group…." *See*

Complaint, Ex. 8 at Claims 1, 5, 12. Thus, irrespective of whether the "wireless local area

network (WLAN)" is a "data network," the plain language of the claims does not support

limiting the term "wireless local area network (WLAN)" to a "data network…for transferring

digital data packets between networked devices."

Furthermore, the specification of the '896 Patent does not restrict the scope of the term "wireless local area network (WLAN)" to a "data network…for transferring digital data packets between networked devices." For example, Figure 1 depicts an exemplary configuration 100 in which the invention of the '896 Patent may be practiced. *See* Complaint, Ex. 8 at 5:42-44, Fig. 1. Like in the '949 patent, the specification of the '896 patent describes that "device 112" (shown as a stereo system) "is configured to receive an ***analog*** audio source (e.g., from broadcasting) or retrieve a digital audio source (e.g., from a compact disk)." *Id.* at 6:13-20 (emphasis added). The specification further teaches that the "analog audio sources ***can be*** converted to digital audio sources," and that "all audio sources, regardless of where they are located or how they are received, may be shared among the devices on the network 108." *Id.* (emphasis added).

These references in the specification to analog audio sources—and to sharing the audio sources among devices on the network—contradicts Sonos' contention that the term "wireless local area network (WLAN)" in the '896 Patent is limited to a "data network…for transferring digital data packets between networked devices."

Accordingly, for the reason set forth above and in Section IV.C.1, the Staff submits that Sonos' improperly narrow construction should be rejected by the CALJ. Instead, the Staff submits that the term "wireless local area network (WLAN)" in the '896 Patent should be given its plain and ordinary meaning.

2.   "security key"

The parties offer the following claim constructions for the above-identified term:

"security key"		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
Plain and ordinary meaning; no construction necessary.	"a string of bits used in encryption to make data unreadable, or in decryption to render encrypted data readable"	Plain and ordinary meaning; no construction necessary

a.   The Term Should Be Given Its Plain and Ordinary Meaning

The key dispute amongst the parties is whether passwords and passphrases fall within the scope of the term "security key" in the '896 Patent. *See* Sonos Initial *Markman* Brief at 22-27; *see also* Google Initial *Markman* Brief at 42-49. Google's proposed construction excludes passwords and passphrases by limiting "security key" to binary format (*i.e.*, "a string of bits") and by limiting the use of the key to "encryption" and "decryption." *Id.* As discussed below, Google's proposed construction is inconsistent with the intrinsic evidence (and pertinent extrinsic evidence) and, therefore, should be rejected by the CALJ. Instead, the Staff submits that the term should be given its plain and ordinary meaning (*e.g.*, information that allows access to a secure network).

b.   Google's Construction Is Not Supported by the Intrinsic Evidence

Claim 1 of the '896 Patent requires "a security key for the secure WLAN." *See* Complaint, Ex. 8 at Claim 1. The claim language places no limitation on the format of the security key (*e.g.*, binary, hexadecimal format, a string of characters, or other possible formats). *Id.* Nor does the claim language explicitly limit the use of the "security key" to encryption or decryption. *Id.* Google's construction thus improperly imports limitations into the claims that are not required by the claim language. *See, e.g., Phillips*, 415 F.3d at 1323.

Turning to the specification of the '896 Patent, it describes an "automatic configuration

process" that causes several messages to be exchanged between devices wherein "some of the messages carry information pertaining to a transmission channel, an identifier of the network and a *security key for subsequent communication*, [and] at least some of the messages are encrypted." *See* Complaint, Ex. 8 at 3:11-4:24 (emphasis added); *see also id*. at 14:32-35. The specification further discloses that "[i]n one embodiment" the network "may be characterized by…a unique set of configuration variables or parameters, such as…WEP keys (wired equivalent privacy, or simply security keys). *Id.* at 9:28-41. Google's improper attempts to read this particular embodiment into the claims as a limitation should be rejected by the CALJ. *See, e.g.,* Google Initial *Markman* Brief at 44 (arguing that "the '896 patent specification describes the 'security key' of claim 1 as a WEP key…."); *see also Tate*, 222 F.3d at 966.

Furthermore, Google's proposed construction limiting the use of the "security key" to "encryption" and "decryption" is inconsistent with the teachings of the specification. When discussing encryption, the specification of the '896 Patent uses terms such as "public key" or "private key." *See* Complaint, Ex. 8 at 13:21-23, 13:31-32, 13:62-63, 15:26-27. Google's attempts to encompass all instances of the word "key" in the specification in its proposed construction of "security key" is thus inconsistent with the specification's use of different terms (*e.g.*, "security key," "WEP key," "public key" and "private key") to describe the teachings of the '896 Patent. *See* Google Initial *Markman* Brief at 45-46. For at least these reasons, the specification does not support limiting the term "security key" to use for "encryption" and "decryption," as Google proposes.

Similarly, contrary to Google's assertions otherwise, the specification does not reject the idea that "security key" includes other security settings like passphrases and passwords. *Id.* at 48. The specification of the '896 Patent does not specify the format (*e.g.*, binary or hexadecimal)

for the "WEP key" or "security key." And neither Figure 5 of the '896 Patent nor related U.S.

Patent No. 9,866,447 ("the '447 Patent) prohibit a password or passphrase from being a "security

key," as Google contends. *See* Google Initial *Markman* Brief at 48-49; *see also* Sonos Initial

Markman Brief, Ex. 13 (Reb. Weissman Decl.) at ¶¶ 40-41 (describing why "the radio buttons"

in Figure 5 show to a POSITA that the figure contemplates that both the WEP passphrase and

WEP key are examples of a security key); *id*. at ¶ 42 (explaining that "were a POSITA to draw

any conclusion from [the '447 Patent] it would be that a 'password' is a narrower example of a

type of 'security key.'"). For at least these reasons, the specification also does not support

limiting the term "security key" to binary format (*i.e.*, "a string of bits"), as Google proposes.

Accordingly, Google's proposed claim construction of the term "security key" is not

supported by the intrinsic evidence and should be rejected by the CALJ.

c.   Google's Construction Is Inconsistent with the Pertinent Extrinsic Evidence

Google relies on numerous technical dictionary definitions and other technical resources

that define and explain "key[s]" to support its proposed narrow construction of the term "security

key." *See* Google Initial *Markman* Brief at 46; *id.* at Ex. 6 (Shoemake Decl.) ¶ 70. Google's

extrinsic evidence thus fails to address how a POSITA would have understood the term at issue.

Instead, various technical dictionary definitions of the term "security key" support Sonos'

and the Staff's position that a POSITA would have understood the term to be broader than just

keys in binary format used for encryption and decryption. *See, e.g.,* Sonos Initial *Markman* Brief

at 26-27; *id.* at Ex. 9 (Weissman Decl.) ¶¶ 22-24.

Furthermore, other extrinsic evidence clearly demonstrates that a POSITA would

understand passwords and passphrases to fall within the scope of the term "security key." For

example, *Wireless Home Networking for Dummies* (4ᵗʰ ed.), clearly indicates that WEP or WPA

passwords or passphrases are examples of security keys:

> **3. If you're connecting to a secured (WEP or WPA) network, Windows prompts you to enter the password. Enter the WEP or WPA password in the Security Key box,** as shown in Figure 7-7, and then click OK.

Figure 7-7: Enter your security key (WPA or WEP passphrase) in this box.

> **Connect to a Network**
>
> Type the network security key
>
> Security key: ●●●●●●●●●
> ☑ Hide characters
>
> [OK]   [Cancel]

Your computer connects to the network, and you're all set. If you selected the Connect Automatically option in Step 2, your computer will always connect to this network whenever it's within range.

See Staff Ex. 3 (*Wireless Home Networking for Dummies*) at *17 (emphasis added); *see also*

Staff Ex. 4 (Weissman Depo. Tr.) at 158:3-160:21; *see also id*. at 160:17-21 ("Q. Okay. I

believe you also testified that a POSITA would have understood the definition of security key in

the '896 patent to be materially the same from 2004 to today, correct? A. That's correct.")

Accordingly, for the reasons set forth above, the Staff submits that Google's improperly

narrow construction should be rejected by the CALJ. Instead, the Staff submits that the term

"security key" in the '896 Patent should be given its plain and ordinary meaning.

3.   Element 1F and Element 1G

Google seeks construction of Elements 1F and 1G of claim 1 of the '896 Patent. *See*

Google Initial *Markman* Brief at 34-37; *see also* Sonos Initial *Markman* Brief at 27-29.

The parties offer the following claim constructions:

Element 1F and Element 1G		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
Plain and ordinary meaning; no construction necessary	Element 1F ***must happen before*** Element 1G	Plain and ordinary meaning; no construction necessary

It is not clear to the Staff what dispute, if any, exists between the parties regarding the meaning of Elements 1F and 1G. *See, e.g.,* Google Initial *Markman* Brief, Ex. 26 at 1 ("Google has failed to articulate how the language in Claim 1 is subject to different interpretations that require clarification. If Google can explain how the language might be interpreted in more than one way, Sonos would be willing to consider a clarification.").

Elements 1F and 1G of claim 1 of the '896 Patent are as follows:

Element 1F	while operating on a secure wireless local area network (WLAN) that is defined by an access point, (a) ***receiving***, via a graphical user interface (GUI) associated with an application for controlling one or more playback devices, ***user input*** indicating that a user wishes to set up a playback device to operate on the secure WLAN and (b) ***receiving a first message*** indicating that a given playback device is available for setup;
Element 1G	***after receiving the user input and receiving the first message, transmitting a response*** to the first message that facilitates establishing an initial communication path with the given playback device, wherein the initial communication path with the given playback device does not traverse the access point;

See Complaint, Ex. 8 at Claim 1 (emphasis added).

The plain language of the claim requires: (i) "receiving…user input;" (ii) "receiving a first message;" and (iii) "after receiving the user input and receiving the first message, transmitting a response…." *Id.*

Google's proposed construction seeks to add a limitation that the "receiving" in Element 1F ***must happen before*** the "transmitting" in Element 1G. Google has not explained why its

construction is necessary, nor how its construction differs from the clear language of the claim
(*e.g.*, the phrase "after receiving the user input and receiving the first message, transmitting a
response…").

Because the claim language is clear on its face, and the specification of the '896 Patent
does not deviate from the clear language of the claims, the Staff submits that Google's
construction should be rejected by the CALJ. Instead, Elements 1F and 1G in the '896 Patent
should be given their plain and ordinary meaning. *See, e.g., Phillips*, 415 F.3d at 1316.

4.   Element 1E and Element 1F

The parties dispute whether Elements IE and IF of claim 1 of the '896 Patent improperly
combine system claim limitations with a method claim limitation, thus rendering claim 1 (and its
dependent claims) indefinite. *See* Google Initial *Markman* Brief at 37-39; *see also* Sonos Initial
Markman Brief at 29-32.

The parties' positions are as follows:

Element 1E and Element 1F		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
Plain and ordinary meaning; no construction necessary	Indefinite	Plain and ordinary meaning; no construction necessary

Element 1E and Element 1F of claim 1 of the '896 Patent are as follows:

Element 1E	program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:
Element 1F	while operating on a secure wireless local area network (WLAN) that is defined by an access point, (a) receiving, via a graphical user interface (GUI) associated with an application for controlling one or more playback devices, user input indicating that a user wishes to set up a playback device to operate on the secure WLAN and (b) receiving a first message indicating that a given playback device is available for setup;

See Complaint, Ex. 8 at Claim 1.

Google contends that the phrase "while operating on a secure wireless local area network (WLAN)" in claim 1 "describes the state of the 'computing device' during actual use, and not just its capabilities," thus rendering the claim indefinite. *See* Google Initial *Markman* Brief at 37-39. For the reasons discussed below, Google's argument is without merit.

Claim 1 of the '896 Patent claims a "computing device" with a "computer-readable medium" that "cause[s] the computing device to perform [certain] functions." *See* Complaint, Ex. 8 at Claim 1. Thus, like other computer-readable medium claims ("CRM claims" or "Beauregard claims"), claim 1 of the '896 Patent defines the "computer-readable medium" in terms of the functions it enables the "computing device" to perform (similar to a method claim). *See, e.g., In re Beauregard,* 53 F.3d 1583 (Fed. Cir. 1995) (confirming computer-readable medium claims recite a patent-eligible product under 35 U.S.C. § 101).[8]

The Federal Circuit, in *Finjan v. Secure Computing Corp.*, 626 F.3d 1197 (Fed. Cir. 2010), made clear that such CRM claims are infringed when one makes, uses, offers to sells, or sells the claimed apparatus, even if the claimed code is not executed. *Id.* at 1203-1205. In *Finjan*, the claim at issue recited a "computer-readable storage medium storing program code for causing a server that serves as a gateway to a client to perform the steps of: receiving ...; comparing ...; and preventing execution...." *Id.* at 1205. The Federal Circuit found that "[t]his language does not require that the program code be 'active,' only that it be written 'for causing' a server…or a computer…to perform certain steps." *Id.* Thus, the Federal Circuit affirmed that

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[8] Google cites *Certain Unmanned Aerial Vehicles & Components Thereof*, Inv. No. 337-TA-1133, Order No. 15 (June 21, 2019) and *Imperium (IP) Holdings, Inc. v. Apple Inc.,* No. 4:11-cv-163, 2012 Markman 6949611, at *28 (E.D. Tex. July 2, 2012) in support of its arguments. *See* Google Initial *Markman* Brief at 38-39. These cases are distinguishable, at minimum, because they do not address computer-readable medium claims.

the defendant's devices infringed the asserted claim even though the defendant sold its devices with the relevant software disabled and the customer had to purchase a key to activate the software. *Id.* ("The fact that users needed to 'activate the functions programmed' by purchasing keys does not detract from or somehow nullify the existence of the claimed structure in the accused software."); *id.* at 1204 ("[T]o infringe a claim that recites capability and not actual operation, an accused device 'need only be capable of operating' in the described mode.").

Here, the phrase "while operating on a secure wireless local area network (WLAN)" in claim 1 of the '896 Patent is merely describing the functions the claimed "computer-readable medium" enables the "computing device" to perform. Because infringement of a CRM claim occurs without actual use of the device (*e.g.*, even if the claimed program code is not executed), the phrase does not require an activity to be performed by the user.

Thus, unlike in *IPXL Holdings* and similar cases, there is no confusion as to whether infringement occurs when one creates the claimed "computing device," or when the user actually uses the device. *See IPXL Holdings L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377, 1379-1384 (Fed.Cir.2005) (finding indefiniteness where the claim language included "and the user uses the input means to either change ..."); *see also In re Katz Interactive Call Processing Patent Litig.,*639 F.3d 1303, 1318 (Fed. Cir. 2011) (finding indefiniteness where the claim language included "said certain of said individual callers digitally enter data"); *H-W Tech., L.C. v. Overstock.com, Inc.*, 758 F.3d 1329, 1336 (Fed.Cir.2014) (finding indefiniteness of "tangible computer readable medium" claims because the claim language included "wherein said user completes" and "where said user selects"). Rather, claim 1 of the '896 Patent merely uses permissible functional language to describe the capabilities of the claimed system, and is thus not indefinite. *See, e.g., MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1316 (Fed.

Cir. 2017) ("Because the claims merely use permissible functional language to describe the capabilities of the claimed system, it is clear that infringement occurs when one makes, uses, offers to sell, or sells the claimed system.").

Accordingly, the Staff submits that Elements 1E and 1F in the '896 Patent are not indefinite and should be given their plain and ordinary meaning.

5.   "at least a second message…"

The parties offer the following claim constructions for the above-identified term:

"at least a second message containing network configuration parameters, wherein the network configuration parameters comprise an identifier of the secure WLAN and a security key for the secure WLAN"		
Complainant's Proposed Construction	Respondents' Proposed Construction	Staff's Proposed Construction
"one or more additional messages that collectively contain an identifier of the secure WLAN and a security key for the secure WLAN"	"at least one second message containing network configuration parameters, wherein the network configuration parameters comprise an identifier of the secure WLAN and a security key for the secure WLAN"	Plain and ordinary meaning; no construction necessary

The parties' dispute with respect to this term centers on whether the "network configuration parameters" must be transmitted in each second message or can be divided between one or more second messages. *See* Sonos Initial *Markman* Brief at 32-36; *see also* Google Initial *Markman* Brief at 39-42. For the reasons discussed below, the Staff submits that the term should be given its plain and ordinary meaning. The Staff also would not object to the adoption of Google's construction. Sonos' proposed construction, however, is inconsistent with the plain meaning of the claim language and should be rejected by the CALJ.

a.   The Term Should Be Given Its Plain and Ordinary Meaning

The Staff contends that no construction is necessary because the meaning of the term is readily apparent from the claim language itself. *See, e.g., Phillips*, 415 F.3d at 1316. Specifically, claim 1 of the '896 Patent requires "at least a second message ***containing*** network configuration parameters," and further explicitly states that "the network configuration parameters ***comprise*** an identifier of the secure WLAN ***and*** a security key for the secure WLAN." *See* Complaint, Ex. 8 at Claim 1 (emphasis added). Thus, the plain meaning of the limitation requires that each second message contain the network configuration parameters (*i.e.*, an identifier of the secure WLAN and a security key for the secure WLAN). *See, e.g., CoStar Realty Info., Inc. v. CIVIX-DDI, LLC*, 2013 WL 5346440, at *6 (N.D. Ill. Sept. 23, 2013) (finding that the claim language "the request *containing*" both a category and geographic vicinity means that even if there could be multiple requests "each request must contain both the category and the geographic vicinity."); *TiVo, Inc. v. EchoStar Commc'ns Corp.*, 516 F.3d 1290, 1303 (Fed. Cir. 2008).

Furthermore, the plain language of the claims allows for the second message to contain additional information beyond the "network configuration parameters." For example, unasserted dependent claim 10 of the '896 Patent (reproduced below) requires that, in addition to containing the network configuration parameters, the second message of claim 1 must "comprise[] a command for the given playback device to adopt the network configuration parameters":

> **10.** The computing device of claim **1**, wherein the second message comprises a command for the given playback device to adopt the network configuration parameters.

See Complaint, Ex. 8 at Claim 10. Because the second message can contain additional information beyond the "network configuration parameters," the claim language "***at least*** a

second message containing network configuration parameters" is not rendered meaningless and superfluous, as Sonos contends. *See* Sonos Initial *Markman* Brief at 33-34.

> **b.**   **The Specification Supports the Staff's and Google's Understanding of the Claim Language**

The specification of the '896 Patent further supports the Staff's construction. For example, the specification describes an "automatic configuration process" that causes several messages to be exchanged between devices wherein "some of the messages carry information pertaining to a transmission channel, an identifier of the network and a security key for subsequent communication, [and] at least some of the messages are encrypted." *See* Complaint, Ex. 8 at 3:11-4:24.

Figure 3B (reproduced below) shows an embodiment that involves a process of exchanging five messages between devices:
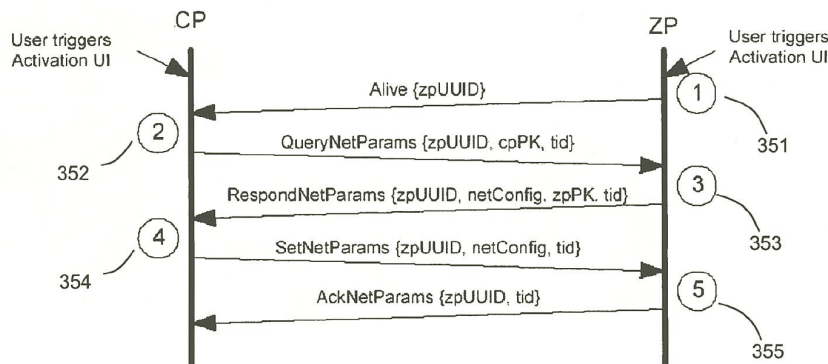
FIG. 3B

Id. at Fig. 3B, 13:4-42. The specification explains that the "SetNetParams" message in Figure 3B is "a command message…indicating that the [playback device] should reconfigure its network parameters." *Id.* at 13:29-37. The specification explains that "[t]he command includes *at least* a zpUU/O, netConfig and tid," wherein "netConfig includes the new configuration parameters for the [playback device]…." *Id.* (emphasis added). The specification further

describes that when the playback device "receives a SetNetParams message, it reconfigures its own HHID [*i.e.*, an identifier] and WEP key [*i.e.*, a security key] to match those contained in the network packet." *Id.* at 14:15-17. The specification thus discloses a single message (the "SetNetParams" message) that contains both an identifier and a security key.

Accordingly, the specification supports the Staff's and Google's understanding of the term "at least a second message containing network configuration parameters, wherein the network configuration parameters comprise an identifier of the secure WLAN and a security key for the secure WLAN." Therefore, the Staff submits that Sonos' proposed construction should be rejected by the CALJ, and the term should be given its plain and ordinary meaning.

IX.   CONCLUSION

For the reasons set forth above, the Staff submits that its proposed constructions for the disputed claim terms are most consistent with the intrinsic evidence (and pertinent extrinsic evidence) and, therefore, should be adopted by the CALJ.

Respectfully submitted,

 /s/ *Cortney C. Hoecherl*

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July 13, 2020

Certain Audio Players and Controllers,   Inv. No. 337-TA-1191
Components Thereof, and Products
Containing the Same

<div align="center">

CERTIFICATE OF SERVICE

</div>

The undersigned certifies that on July 13, 2020 the foregoing **COMMISSION INVESTIGATIVE STAFF'S INITIAL *MARKMAN* BRIEF**, was filed with the Commission, served upon Chief Administrative Law Judge Charles E. Bullock, and served upon the private parties in the manner indicated below:

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<u>STAFF EXHIBIT 1</u>

List of Asserted Claims

COMMISSION INVESTIGATIVE STAFF'S INITIAL *MARKMAN* BRIEF

Investigation No. 337-TA-1191

Staff Exhibit 1
List of Asserted Claims

I.   U.S. PATENT NO. 9,195,258

Claim 17	
Claim Element	*Claim Language*
Preamble	17. A first zone player comprising:
Element 17A	a network interface configured to interface the first zone player with at least a **local area network (LAN)**;
Element 17B	a device clock configured to generate clock time information for the first zone player;
Element 17C	one or more processors; and
Element 17D	a tangible, non-transitory computer-readable memory having instructions stored thereon that, when executed by the one or more processors, cause the first zone player to:
Element 17E	receive control information from any one of a plurality of controllers over the LAN via the network interface, wherein the received control information comprises a direction for the first zone player to enter into a synchrony group with at least a second zone player;
Element 17F	in response to the direction, enter into the synchrony group with the second zone player,
Element 17G	wherein in the synchrony group, the first and second zone players arc configured to playback audio in synchrony based at least in part on (i) audio content, (ii) playback timing information associated with the audio content, wherein the playback timing information is generated by one of the first or second zone players, and (iii) clock time information for the one of the first or second zone players, and wherein the generated playback timing information and the clock time information are transmitted from the one of the first or second zone players to the other of the first or second zone players, wherein the first and second zone players remain independently clocked while playing back audio in synchrony; and
Element 17H	transmit status information to at least one of the plurality of controllers over the LAN via the network interface, wherein the status information comprises an indication of a status of the synchrony group.

Staff Exhibit 1
List of Asserted Claims

Claim 21	
Claim Element	**Claim Language**
Element 21A	21. The first zone player of claim 17, wherein the status information further comprises one or both of (a) an identification of a zone player that is operating as a master device of the synchrony group and (b) an identification of at least one zone player that is operating as a slave device of the synchrony group.

Claim 22	
Claim Element	**Claim Language**
Element 22A	22. The first zone player of claim 17, wherein the first zone player comprises a master device of the synchrony group.

Claim 23	
Claim Element	**Claim Language**
Element 23A	23. The first zone player of claim 17, wherein the tangible computer-readable memory further has instructions stored thereon that, when executed by the one or more processors, cause the first zone player to determine whether the first zone player is operating as a master device of the synchrony group, and wherein the instructions that cause the first zone player to transmit status information to the at least one of the plurality of controllers comprise instructions that cause the first zone player to transmit status information to the at least one of the plurality of controllers only while the first zone player is operating as the master device of the synchrony group.

Claim 24	
Claim Element	**Claim Language**
Element 24A	24. The first zone player of claim 23, wherein the tangible computer-readable memory further has instructions stored thereon that, when executed by the one or more processors, cause the first zone player to:
Element 24B	receive audio content via the network interface; and
Element 24C	while the first zone player is operating as the master device of the synchrony group, transmit the received audio content, via the network interface, to at least one zone player that is operating as a slave device of the synchrony group.

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Staff Exhibit 1
List of Asserted Claims

Claim 26	
Claim Element	**Claim Language**
Element 26A	26. The first zone player of claim 17, wherein the first zone player is a master zone player of the synchrony group, wherein the audio content comprises a plurality of frames, wherein the playback timing information associated with the audio content comprises a playback time for each frame of the audio content, and wherein the first zone player is configured to play back audio in synchrony with the second zone player based at least in part on (i) the audio content, (ii) playback timing information associated with the audio content, wherein the playback timing information is generated by the first zone player, and (iii) clock time information for the first zone player, and wherein the generated playback timing information and the clock time information are transmitted from the first zone player to the second zone player; and
Element 26B	wherein the first zone player playing back audio in synchrony comprises, for each frame of the audio content, the first zone player playing back the frame when the device clock of the first zone player is the same as the playback time for the frame.

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Staff Exhibit 1
List of Asserted Claims

II.   U.S. PATENT NO. 10,209,953

Claim 7	
Claim Element	**Claim Language**
Preamble	7. A first zone player comprising:
Element 7A	a network interface that is configured to provide an interconnection with at least one data network;
Element 7B	a clock that is configured to provide a clock time of the first zone player;
Element 7C	at least one processor;
Element 7D	a tangible, non-transitory computer-readable medium; and
Element 7E	program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor to cause the first zone player to perform functions comprising:
Element 7F	receiving a request to enter into a synchrony group with at least a second zone player that is communicatively coupled with the first zone player over a **local area network (LAN)**;
Element 7G	in response to receiving the request to enter into the synchrony group, entering into the synchrony group with the second zone player, wherein the first zone player is selected to begin operating as a slave of the synchrony group and the second zone player is selected to begin operating as a master of the synchrony group, and wherein the clock time of the first zone player differs from a clock time of the second zone player;
Element 7H	after beginning to operate as the slave of the synchrony group:
Element 7I	receiving, from the second zone player over the LAN, clock timing information that comprises at least one reading of the clock time of the second zone player;
Element 7J	based on the received clock timing information, determining a differential between the clock time of the first zone player and the clock time of the second zone player;
Element 7K	receiving, from the second zone player over the LAN, (a) audio information for at least a first audio track and (b) playback timing information associated with the audio information for the first audio track that comprises an indicator of a first future time, relative to the clock time of the second zone player, at which the first and second zone players are to initiate synchronous playback of the audio information for the first audio track;

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Staff Exhibit 1
List of Asserted Claims

Element 7L	updating the first future time to account for the determined differential between the clock time of the first zone player and the clock time of the second zone player; and
Element 7M	when the clock time of the first zone player reaches the updated first future time, initiating synchronous playback of the received audio information with the second zone player.

Claim 12	
Claim Element	*Claim Language*
Element 12A	12. The first zone player of claim 7, wherein receiving the audio information for the first audio track from the second zone player over the LAN comprises:
Element 12B	receiving a series of frames that each include a respective portion of the received[1] audio information for the first audio track.

Claim 13	
Claim Element	*Claim Language*
Element 13A	13. The first zone player of claim 12, wherein a first frame in the series of frames includes the indicator of the first future time.

Claim 14	
Claim Element	*Claim Language*
Element 14A	14. The first zone player of claim 13, wherein the playback timing information further comprises, for each subsequent frame in the series of frames:
Element 14B	an indicator of a respective future time, relative to the clock time of the second zone player, at which the frame is to be synchronously played back by the first and second zone players.

Claim 22	
Claim Element	*Claim Language*
Element 22A	22. The first zone player of claim 7, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor to cause the first zone player to perform the following functions while operating as the slave

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[1] Element 12B contains changes made in the certificate of correction for the '953 Patent (issued on December 31, 2019). *See* Sonos Initial *Markman* Brief, Ex. 4.

Staff Exhibit 1
List of Asserted Claims

	of the synchrony group:
Element 22B	receiving, from the second zone player over the LAN, a command to adjust an individual volume of the first zone player; and
Element 22C	in response to receiving the command, adjusting the individual volume of the first zone player.

Claim 23	
Claim Element	***Claim Language***
Element 23A	23. The first zone player of claim 7, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor to cause the first zone player to perform the following functions:
Element 23B	while operating as the slave of the synchrony group, receiving, from the second zone player over the LAN, control information that enables the first zone player to begin operating as the master of the synchrony group; and
Element 23C	in response to receiving the control information, transitioning from operating as the slave of the synchrony group to operating as the master of the synchrony group.

Claim 24	
Claim Element	***Claim Language***
Element 24A	24. The first zone player of claim 7, further comprising program instructions stored on the tangible, non-transitory computer-readable medium that are executable by the at least one processor to cause the first zone player to perform the following functions:
Element 24B	while operating as the slave of the synchrony group, receiving a request to disengage from the synchrony group;
Element 24C	in response to receiving the request to disengage from the synchrony group, disengaging from the synchrony group and transitioning from operating as the slave of the synchrony group to operating as a standalone zone player.

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Staff Exhibit 1
List of Asserted Claims

III.   U.S. PATENT NO. 9,219,959

Claim 5[2]	
Claim Element	***Claim Language***
Preamble	5. **[**The playback device of claim 1,**]** *A playback device configured to output audio in a multi-channel listening environment, the playback device comprising:*
Element 5A	*a network interface configured to receive audio data over a network;*
Element 5B	*a plurality of speaker drivers configured to output audio based on the audio data;*
Element 5C	*one or more processors; and*
Element 5D	*tangible, non-transitory, computer readable memory comprising instructions encoded therein, wherein the instructions, when executed by the one or more processors, cause the playback device to (i) process the audio data before the playback device outputs audio from the plurality of speaker drivers, (ii) determine that a **type of pairing** of the playback device comprises one of at least a **first type of pairing** or a **second type of pairing**,* wherein in the first type of pairing, the playback device is configured to output audio comprising two channel sound via the plurality of speaker drivers, and wherein in the second type of pairing, the playback device is configured to output audio comprising no more than one channel of the two channel sound via the plurality of speaker drivers, *(iii) configure the playback device to perform a first **equalization of the audio data** before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the first type of pairing, and (iv) configure the playback device to perform a second equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the second type of pairing.*
Claim 9	
Claim Element	***Claim Language***

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[2] The language of asserted claims is reproduced as shown in the reexamination certificate for the '959 Patent. *See* Complaint, Ex. 7. As such, matter enclosed in heavy brackets **[ ]** appeared in the original patent, but has been deleted and is no longer a part of the patent. Whereas, matter printed in italics indicates additions made to the patent during reexamination.

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Staff Exhibit 1
List of Asserted Claims

Preamble	9. **[**The playback device of claim 1, wherein the playback device is further configured to (i)**]** *A playback device configured to output audio in a multi-channel listening environment, the playback device comprising:*
Element 9A	*a network interface configured to receive audio data over a network;*
Element 9B	*a plurality of speaker drivers configured to output audio based on the audio data;*
Element 9C	*one or more processors; and*
Element 9D	*tangible, non-transitory, computer readable memory comprising instructions encoded therein, wherein the instructions, when executed by the one or more processors cause the playback device to (i) process the audio data before the playback device outputs audio from the plurality of speaker drivers, (ii) determine that a type of pairing of the playback device comprises one of at least a first type of pairing or a second type of pairing, (iii) configure the playback device to perform a first equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the first type of pairing, (iv) configure the playback device to perform a second equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the second type of pairing, (v)* separate the audio data into separate audio channels, **[**(ii)**]** *(vi)* output audio based on audio data of at least one separate audio channel from the plurality of speaker drivers, and **[**(ii)**]** *(vii)* transmit at least one additional separate audio channel over the network.
Claim 10	
Claim Element	*Claim Language*
Preamble	10. **[**The playback device of claim 1, wherein the playback device is further configured to**]** *A playback device configured to output audio in a multi-channel listening environment, the playback device comprising:*
Element 10A	*a network interface configured to receive audio data over a network;*
Element 10B	*a plurality of speaker drivers configured to output audio based on the audio data;*
Element 10C	*one or more processors; and*
Element 10D	*tangible, non-transitory, computer readable memory comprising instructions encoded therein, wherein the instructions, when executed by*

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Staff Exhibit 1
List of Asserted Claims

	the one or more processors, cause the playback device to (i) receive a signal from a controller over the network, wherein the signal comprises an instruction for the playback device to pair with one or more playback devices, *(ii) process the audio data before the playback device outputs audio from the plurality of speaker drivers, (iii) determine that a type of pairing of the playback device comprises one of at least a first type of pairing or a second type of pairing. (iv) configure the playback device to perform a first equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the first type of pairing, and (v) configure the playback device to perform a second equalization of the audio data before outputting audio based on the audio data from the plurality of speaker drivers when the type of pairing is determined to comprise the second type of pairing.*

Claim 29	
Claim Element	***Claim Language***
Element 29A	*29. The playback device of claim 5, wherein the playback device is further configured to receive a signal from a controller over the network, wherein the signal comprises an instruction for the playback device to pair with one or more playback devices.*

Claim 35	
Claim Element	***Claim Language***
Element 35A	*35. The playback device of claim 9, wherein the playback device is further configured to receive a signal from a controller over the network, wherein the signal comprises an instruction for the playback device to pair with one or more playback devices.*

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Staff Exhibit 1
List of Asserted Claims

IV.   U.S. PATENT NO. 8,588,949

Claim 1[3]	
Claim Element	*Claim Language*
Preamble	1. A multimedia controller including a processor, the controller configured to:
Element 1A	provide a user interface for a player group, wherein the player group includes a plurality of players in a **local area network**, and wherein each player is an **independent playback device** configured to playback a multimedia output from a multimedia source;
Element 1B	accept via the user interface an input to facilitate formation of the player group, wherein the input to facilitate formation of the player group indicates that at least two of the plurality of players in the local area network are to be included in the player group *for synchronized playback of a multimedia output from the same multimedia source*;
Element 1C	for [each of the plurality of players within] *any individual player in* the player group, accept via the user interface [an] *a player-specific* input to adjust a volume [associated with the] *of that individual* player, wherein the *player-specific* input to adjust the volume [associated with the] *of that individual* player causes [the corresponding independent playback device] *that individual player* to adjust its volume; and
Element 1D	accept via the user interface [an] *a group-level* input to adjust a volume associated with the player group, wherein the *group-level* input to adjust the volume associated with the *player* group causes [the corresponding independent playback devices] *each of the players* in the player group to adjust [their volumes] *its respective volume*.
Claim 2	
Claim Element	*Claim Language*
Element 2A	2. The multimedia controller of claim 1, wherein the controller is further configured to accept via the user interface an input to remove one of the plurality of players from the player group.

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[3] The language of Claims 1 and 4 is reproduced as shown in the reexamination certificate for the '949 Patent. *See* Complaint, Ex. 10. As such, matter enclosed in heavy brackets **[ ]** appeared in the original patent, but has been deleted and is no longer a part of the patent. Whereas, matter printed in italics indicates additions made to the patent during reexamination. Claims 2 and 5 (now dependent on an amended claim) appear in the original patent.

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Staff Exhibit 1
List of Asserted Claims

Claim 4	
Claim Element	*Claim Language*
Element 4A	4. The multimedia controller of [claim 3] *claim 1*, wherein the *group-level* input to [mute] *adjust the volume associated with* the player group *further* causes [the players in the player group to adjust their volumes further comprises]:
Element 4B	the controller [sending] *to send* an instruction to one of the players in the player group, the instruction indicating that the volumes of each of the players in the player group should be adjusted in scale.
Claim 5	
Claim Element	*Claim Language*
Element 5A	5. The multimedia controller of claim 1, wherein the controller is further configured to accept via the user interface an input to name the player group.

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Staff Exhibit 1
List of Asserted Claims

V.   U.S. PATENT NO. 10,439,896

Claim 1	
Claim Element	*Claim Language*
Preamble	1. A computing device comprising:
Element 1A	a user interface;
Element 1B	a network interface;
Element 1C	at least one processor;
Element 1D	a non-transitory computer-readable medium; and
Element 1E	**program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:**
Element 1F	**while operating on a secure wireless local area network (WLAN) that is defined by an access point, (a) receiving, via a graphical user interface (GUI) associated with an application for controlling one or more playback devices, user input indicating that a user wishes to set up a playback device to operate on the secure WLAN and (b) receiving a first message indicating that a given playback device is available for setup;**
Element 1G	after receiving the user input and receiving the first message, transmitting a response to the first message that facilitates establishing an initial communication path with the given playback device, wherein the initial communication path with the given playback device does not traverse the access point;
Element 1H	transmitting, to the given playback device via the initial communication path, **at least a second message containing network configuration parameters, wherein the network configuration parameters comprise an identifier of the secure WLAN and a security key for the secure WLAN;**
Element 1I	after transmitting at least the second message containing the network configuration parameters, detecting an indication that the given playback device has successfully received the network configuration parameters; and
Element 1J	after detecting the indication, transitioning from communicating with the given playback device via the initial communication path to communicating with the given playback device via the secure WLAN that is defined by the access point.

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Staff Exhibit 1
List of Asserted Claims

Claim 3	
Claim Element	*Claim Language*
Element 3A	3. The computing device of claim 1, wherein the given playback device comprises a first playback device of a new networked audio system.

Claim 5	
Claim Element	*Claim Language*
Element 5A	5. The computing device of claim 1, wherein communicating with the given playback device via the secure WLAN comprises transmitting a command to the given playback device related to playback of audio content.

Claim 6	
Claim Element	*Claim Language*
Element 6A	6. The computing device of claim 5, wherein the command comprises a command to retrieve audio content for playback from an audio source that is accessible via a communication path that includes the secure WLAN.

Claim 12	
Claim Element	*Claim Language*
Element 12A	12. The computing device of claim 1, further comprising program instructions stored on the non-transitory computer-readable medium that, when executed by the at least one processor, cause the computing device to perform functions comprising:
Element 12B	after transitioning to communicating with the given playback device via the secure WLAN, transmitting a command to the given playback device to form a group with at least a first playback device of a networked audio system such that the given playback device is configured to play back audio content in synchrony with at least the first playback device.

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STAFF EXHIBIT 2

List of Agreed-Upon Constructions

COMMISSION INVESTIGATIVE STAFF'S INITIAL *MARKMAN* BRIEF

Investigation No. 337-TA-1191

Staff Exhibit 2
List of Agreed-Upon Constructions

I.   U.S. PATENT NO. 9,195,258

The parties agree on the meaning of several terms in the asserted claims of the '258

Patent. The terms appear in **bold**, *italics*, and in the shaded rows, and the parties' agreed-upon

constructions of these terms appear immediately below, and are as follows:

"zone player" / "playback device" / "player"
"data network device configured to process and output audio"
"network interface"
"physical component of a device that provides an interconnection with a data network"
"independently clocked"
"operating in accordance with their own respective clocks during synchronous playback"
"clock time information" / "clock timing information"
"information representing a time value indicated by a device's clock"
"playback timing information"
"information indicating when the audio information [content] is to be played back"
"*synchrony group*"
"a set of two or more zone players that are to play the same audio program synchronously"

Staff Exhibit 2
List of Agreed-Upon Constructions

II.   U.S. PATENT NO. 10,209,953

The parties agree on the meaning of several terms in the asserted claims of the '953

Patent. The terms appear in **bold**, *italics*, and in the shaded rows, and the parties' agreed-upon

constructions of these terms appear immediately below, and are as follows:

"zone player" / "playback device" / "player"
"data network device configured to process and output audio"
"network interface"
"physical component of a device that provides an interconnection with a data network"
"clock time information" / "clock timing information"
"information representing a time value indicated by a device's clock"
"playback timing information"
"information indicating when the audio information [content] is to be played back"
"synchrony group"
"a set of two or more zone players that are to play the same audio program synchronously"

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Staff Exhibit 2
List of Agreed-Upon Constructions

III.   U.S. PATENT NO. 9,219,959

The parties agree on the meaning of several terms in the asserted claims of the '959

Patent. The terms appear in **bold**, *italics*, and in the shaded rows, and the parties' agreed-upon

constructions of these terms appear immediately below, and are as follows:

"zone player" / "playback device" / "player"
"data network device configured to process and output audio"
"*network interface*"
"physical component of a device that provides an interconnection with a data network"
"*pairing*"
"configuration involving two or more playback devices that have different playback roles"

Staff Exhibit 2
List of Agreed-Upon Constructions

IV.   U.S. PATENT NO. 8,588,949

The parties agree on the meaning of several terms in the asserted claims of the '949

Patent. The terms appear in **bold**, *italics*, and in the shaded rows, and the parties' agreed-upon

constructions of these terms appear immediately below, and are as follows:

"zone player" / "playback device" / "player"
"data network device configured to process and output audio"
"multimedia"
"any type of media that comprises audio (including audio alone)"

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Staff Exhibit 2
List of Agreed-Upon Constructions

V.   U.S. PATENT NO. 10,439,896

The parties agree on the meaning of several terms in the asserted claims of the '896

Patent. The terms appear in **bold**, *italics*, and in the shaded rows, and the parties' agreed-upon

constructions of these terms appear immediately below, and are as follows:

"zone player" / "playback device" / "player"
"data network device configured to process and output audio"
"network interface"
"physical component of a device that provides an interconnection with a data network"

STAFF EXHIBIT 3

Excerpts of Exhibit 12 (*Wireless Home Networking for Dummies*) to
Deposition of Dr. Jon B. Weissman

COMMISSION INVESTIGATIVE STAFF'S INITIAL *MARKMAN* BRIEF

Investigation No. 337-TA-1191

4th Edition

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Danny Briere
Pat Hurley

Coauthors of Smart Homes
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Wireless Home Networking

FOR

DUMMIES®

4TH EDITION

by Danny Briere and Pat Hurley

WILEY

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About the Authors

Danny Briere founded TeleChoice, Inc., a telecommunications consulting company, in 1985 and now serves as CEO of the company. Widely known throughout the telecommunications and networking industry, Danny has written more than 1,000 articles about telecommunications topics and has authored or edited eight books, including *Smart Homes For Dummies,* 3rd Edition; *HDTV For Dummies,* 2nd Edition; *Windows XP Media Center Edition 2004 PC For Dummies; Wireless Network Hacks & Mods For Dummies;* and *Home Theater For Dummies,* 2nd Edition (all published by Wiley). He is frequently quoted by leading publications on telecommunications and technology topics and can often be seen on major TV networks providing analysis on the latest communications news and breakthroughs. Danny lives in Mansfield Center, Connecticut, with his wife and four children.

Pat Hurley is director of research with TeleChoice, Inc., specializing in emerging telecommunications technologies, including all the latest access and home technologies: wireless LANs, DSL, cable modems, satellite services, and home networking services. Pat frequently consults with the leading telecommunications carriers, equipment vendors, consumer goods manufacturers, and other players in the telecommunications and consumer electronics industries. Pat is the co-author of *Smart Homes For Dummies,* 3rd Edition; *HDTV For Dummies,* 2nd Edition; *Windows XP Media Center Edition 2004 PC For Dummies; Wireless Network Hacks & Mods For Dummies;* and *Home Theater For Dummies,* 2nd Edition (all published by Wiley). He lives in San Diego, California, with his wife, beautiful daughter, and two smelly and unruly dogs.

Authors' Acknowledgments

Contents at a Glance

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much everything else you may want to know about your connection. If you're having problems with your connection, the View Status pop-up also has a Diagnose button that can help determine the cause of your connection problem.

The Network and Sharing Center includes a helpful Signal Strength meter (which you can see from the View Status screen). We found in our tests that the Windows meter is not as fast to respond as some of the vendors' software that comes with your wireless network card. But if your vendor does not give you a signal meter, this one works fine to find weak coverage areas in your house.

Connecting to a Wireless Network with Windows 7

The latest (and definitely, in our experience) greatest version of Windows is Windows 7. Like Windows Vista before it, Windows 7 makes connecting to wireless networks a snap. The built-in wireless networking configuration system is super slick, and we believe that there's no reason to ever use the software that might come with a network adapter when you're using Windows 7.

The big addition in Windows 7 is the *View Available Networks* feature. This feature lets you quickly find all of the available wireless networks in your location, wherever you may be — at home, in the office, near a wireless hot spot, and so on.

To use this feature to set up your network connection in Windows 7, follow these steps:

1. **Click the View Available Networks icon on the far right in the Windows taskbar.**

   Windows displays a list of available networks, as shown in Figure 7-6.

Figure 7-6: Click here to find your wireless network in Windows 7.

2. **Select the network you want to join by clicking its name (SSID) in the resulting list. If you plan to connect to this network regularly (for example, if this is your home network), select the Connect Automatically check box. Then click the Connect button.**

3. **If you're connecting to a secured (WEP or WPA) network, Windows prompts you to enter the password. Enter the WEP or WPA password in the Security Key box, as shown in Figure 7-7, and then click OK.**

Figure 7-7: Enter your security key (WPA or WEP pass-phrase) in this box.

Your computer connects to the network, and you're all set. If you selected the Connect Automatically option in Step 2, your computer will always connect to this network whenever it's within range.

STAFF EXHIBIT 4

Excerpts from Deposition Transcript of Dr. Jon B. Weissman

COMMISSION INVESTIGATIVE STAFF'S INITIAL *MARKMAN* BRIEF

Investigation No. 337-TA-1191

VERITEXT
LEGAL SOLUTIONS

Deposition of:

Dr. Jon B. Weissman

June 25, 2020

In the Matter of:

Certain Audio Players and Controllers

Veritext Legal Solutions

800-734-5292 | calendar-dmv@veritext.com |

Page 1

1   UNITED STATES INTERNATIONAL TRADE COMMISSION

2   Washington, D.C.

3   - - - - - - - - - - - - - - -x

4   In the Matter of: :

5   CERTAIN AUDIO PLAYERS   :

6   AND CONTROLLERS,   :   Investigation No.

7   COMPONENTS THEREOF, AND   :   337-TA-1191

8   PRODUCTS CONTAINING THE   :

9   SAME.   :

10   - - - - - - - - - - - - - - -x

11

12

13   - - -

14   Thursday, June 25, 2020

15   - - -

16

17

18   REMOTE ZOOM AUDIO/VIDEO deposition of JON B.

19   WEISSMAN, Ph.D., beginning at 9:03 a.m., before

20   Christina S. Hotsko, RPR, CRR, when were present on

21   behalf of the respective parties:

22

Page 2

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   Also Present:
21 Joshua Boria, Video Technician
   Suzie Gonzalez-Pender, Google
22 Shireen Bhatia, ITC Intern

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Page 3

1   C O N T E N T S

Page 5

1   P R O C E E D I N G S
2   VIDEO TECHNICIAN: We are going on the
3 record at 9:03 a.m. on June 25th of 2020.
4   Please take a moment to mute your audio
5 input, as your microphone is sensitive and can   12:03:26
6 pick up whispering and background noises.
7   Please turn off all cell phones or place
8 them away from your computer, as they can
9 interfere with the deposition audio.
10   Audio and video recording will continue   12:03:37
11 to take place unless all parties agree to go off
12 the record.
13   This is media unit 1 of the
14 video-recorded deposition of Dr. Jon B. Weissman
15 in the matter of Sonos, Inc., versus Google, LLC,   12:03:53
16 filed in the United States International Trade
17 Commission, investigation number 337-TA-1191.
18   This deposition is being held in
19 California via video conference.
20   My name is Joshua Boria from the firm   12:04:15
21 Veritext, and I am the videographer. The court
22 reporter is Christina Hotsko from the firm

2 (Pages 2 - 5)

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1 population matches or exceeds the level of
2 ordinary skill in the field of the '896 patent?
3   A. Oh. Obviously, fraction is a vague term.
4 Can you quantify that?
5   Q. Sure. Would you agree that less than   17:34:06
6 30 -- let me start over.
7   Would you agree that less than 10 percent
8 of the U.S. population matches or exceeds the
9 level of ordinary skill in the field of the
10 '896 patent?   17:34:21
11   MR. DE BLANK: Same objection.
12   THE WITNESS: I would agree to that.
13 BY MR. ZIVOJNOVIC:
14   Q. Okay. So the average person in the
15 U.S. -- let me start over.   17:34:31
16   Would you agree that the average person
17 in the U.S. is probably familiar with the
18 word "password"?
19   A. I would think so.
20   Q. Would you think that the average person 17:34:42
21 is familiar with the term "cipher"?
22   MR. DE BLANK: Same objection.

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1   THE WITNESS: So I should have asked this
2 before: So are we talking about today or are we
3 talking about 2004?
4 BY MR. ZIVOJNOVIC:
5   Q. Well, let's focus on the time frame.   17:35:06
6   In 2004, would you think the average
7 person would -- was familiar with the term
8 "cipher"?
9   MR. DE BLANK: Same objection.
10   THE WITNESS: It is more than likely they   17:35:20
11 are not familiar with the term "cipher."
12 BY MR. ZIVOJNOVIC:
13   Q. Now, what if we think about the year 2019
14 or 2020. Would the average person in this year be
15 familiar with the term "cipher"?   17:35:35
16   A. They would be more likely to be familiar
17 than a person in 2004. But I can't -- I don't
18 know how to quantify that. And it may be in the
19 noise. There may not be much difference.
20   Q. Before this case was filed, have you ever 17:36:08
21 relied on Newton's Telecom Dictionary?
22   A. I'm sorry, which telecom dictionary?

Page 156

1   Q. Newton's Telecom Dictionary.
2   A. Sitting here, I can't recall one way or
3 the other.
4   Q. Are you familiar with Newton's Telecom
5 Dictionary outside the context of this case?   17:36:36
6   A. Like I said with respect to web pages,
7 I've done a number of legal cases. I look at a
8 lot of dictionaries. Sitting here today, I can't
9 recall one way or the other.
10   MR. ZIVOJNOVIC: I don't have any other   17:36:51
11 questions at this time.
12   MS. HOECHERL: Good afternoon,
13 Dr. Weissman. I have some additional questions
14 for you. I'm happy to start, but I also want to
15 offer you a break if you need before we begin. 17:37:16
16   THE WITNESS: How about a five-minute
17 bathroom break?
18   MS. HOECHERL: Sure. That would be
19 great.
20   VIDEO TECHNICIAN: Stand by.   17:37:21
21   We are going off the record. The time on
22 the video monitor is 2:37 p.m.

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1   (A recess was taken.)
2   VIDEO TECHNICIAN: We are back on the
3 record. The time on the video monitor is
4 2:44 p.m.
5   EXAMINATION BY COUNSEL FOR THE ITC   17:44:11
6 BY MS. HOECHERL:
7   Q. Good afternoon, Dr. Weissman. Can you
8 hear me?
9   VIDEO TECHNICIAN: I believe you are
10 muted, Doctor.   17:44:28
11   THE WITNESS: I can hear you.
12 BY MS. HOECHERL:
13   Q. Now I can hear you as well. I'd like to
14 continue our discussion about your declaration
15 regarding security key, which is Exhibit 8. And   17:44:41
16 we were discussing your opinion that a person of
17 ordinary skill in the art would understand
18 security key to include password or passphrase,
19 correct?
20   A. That's correct.   17:44:52
21   Q. And in particular, we were discussing
22 some of the extrinsic evidence that you have cited

40 (Pages 154 - 157)

Page 158

1 that was entered as Exhibit 11, correct?

2   A. We were. Yes.

3   MS. HOECHERL: Okay. I'd like to mark as

4 Exhibit 12 a copy of the fourth edition of

5 Wireless Home Networking for Dummies.   17:45:12

6   (Weissman Deposition Exhibit 12 marked

7   for identification and attached to the

8   transcript.)

9 BY MS. HOECHERL:

10   Q. Let me know when you have the upload.   17:45:24

11   A. I've got it.

12   Q. Technology is a little bit tricky to deal

13 with, so I'm glad.

14   If you could turn to page 138 of the

15 document, which I believe is PDF page 158.   17:45:40

16   A. Okay.

17   Q. Okay. And do you see midway through the

18 page there's a section header that says,

19 "Connecting to a Wireless Network with Windows 7"?

20   A. Yes, I do.   17:46:13

21   Q. Okay. If you could please turn to the

22 next page, which is page 139 of the document.

Page 159

1   A. Yes.

2   Q. Okay. Do you see a step number 3 at the

3 middle of the page there?

4   A. I do.

5   Q. And do you see the second sentence that   17:46:36

6 says, "Enter the WEP or WPA password in the

7 security key box, as shown in figure 7-7, and then

8 click OK"?

9   A. I do see that.

10   Q. And then right below that there is a   17:46:51

11 figure 7.7, correct?

12   A. Correct.

13   Q. And the description to the left of

14 figure 7.7 says, "Enter your security key (WPA or

15 WEP passphrase) in this box."   17:47:06

16   Do you see that?

17   A. I do.

18   Q. Is it your understanding that this

19 document equates a WEP password, WEP passphrase

20 and security key?   17:47:25

21   A. It appears to do so, although I don't

22 recall if I've seen this document in detail

Page 160

1 before. But it would appear so.

2   Q. This document was not cited in your

3 declaration, so you may not have seen it before.

4   But reading page 139, does it clearly

5 state that a WEP password and WEP passphrase are   17:47:52

6 types of security keys?

7   A. Yes. I mean, it's indicating that, yeah,

8 WPA passphrase or WEP passphrase are examples of

9 security key.

10   Q. And do you agree this would support your   17:48:13

11 opinion that a person of ordinary skill in the art

12 would understand security key in the '896 patent

13 to include a password or passphrase?

14   A. This is consistent with what I believe a

15 person of ordinary skill would understand the term   17:48:28

16 to mean.

17   Q. Okay. I believe you also testified that

18 a POSITA would have understood the definition of

19 security key in the '896 patent to be materially

20 the same from 2004 to today, correct?   17:48:39

21   A. That's correct.

22   Q. Now, I would like to shift to your

Page 161

1 opinions on the '949 patent. So if you could find

2 Exhibits 3 and 4.

3   Please let me know when you have them.

4   A. I have them now.

5   Q. I'd like to begin by looking at the   17:49:52

6 '949 patent, which is Exhibit 4. And if you could

7 turn to column 2, lines 12 to 17, please.

8   A. Okay.

9   Q. This portion of the background of the

10 invention is describing a need that existed in the   17:50:29

11 prior art, correct?

12   And at the top do you see the paragraph

13 that begins, "There is a need for dynamic control

14 of the audio players as a group. With a minimum"

15 --   17:50:50

16   A. Yeah -- no, I see that. I see that.

17 It's in the background of the invention. Yes.

18   Q. Yes. And it's describing a need for

19 dynamic control of audio players as a group,

20 correct?   17:51:00

21   A. I do see that. Yes.

22   Q. And being able to readily group audio

41 (Pages 158 - 161)

Page 162

1 players with minimum manipulation, correct?

2   A. Yes.

3   Q. And a further need for user interfaces

4 that may be readily utilized to group and control

5 the audio players, correct?   17:51:19

6   A. I do see that. Yes.

7   Q. Would you agree that one of the ways the

8 present invention tries to solve this need is by

9 using independent playback devices that are

10 grouped? And let me provide a little more   17:51:40

11 example.

12   The independent playback devices can play

13 audio independently from one another, and they can

14 also play audio synchronously when they're

15 grouped, correct?   17:52:09

16   A. That's correct. Yes.

17   Q. And that ability would allow you to

18 dynamically group and ungroup playback devices,

19 correct?

20   A. Correct. And to your question about   17:52:16

21 dynamic control, I mean, in the background it

22 refers in the prior paragraph to specifically, you

Page 163

1 know, playing audio in a group.

2   Q. And it we look at the claim 1 of the

3 '949 patent, I believe -- I don't actually know if

4 Exhibit 4 has the re-exam language attached. If

5 not, you have the claim language listed in   17:52:52

6 paragraph 49 of your declaration.

7   A. Yes.

8   Q. So claim elements 1(a) and 1(b) are

9 directed to the grouping of independent playback

10 devices and their ability to play synchronized   17:53:24

11 playback when they're grouped, correct?

12   A. There's other aspects, other limitations,

13 but at a high level, it is referring to that

14 ability. Yes.

15   Q. Okay. Yeah, I didn't mean to exclude the   17:53:46

16 other aspects of those elements. But at least one

17 aspect of elements 1(a) and 1(b) address the

18 ability for the independent playback devices to be

19 grouped and to play synchronously when they're

20 grouped, correct?   17:54:07

21   A. I agree.

22   Q. Okay. And the capability of the

Page 164

1 independent playback devices to both play

2 multimedia separately from other players and to

3 play multimedia synchronously when grouped was

4 important in overcoming the prior art during

5 prosecution, correct?   17:54:36

6   A. My understanding is that was important to

7 draw a distinction with at least Metcalf.

8   Q. Okay. And I think paragraph 31 of your

9 declaration, which is Exhibit 3, talks about

10 Metcalf, correct?   17:54:53

11   A. It does talk about Metcalf in 31.

12   Q. And one of the things you note is that

13 the audio components of Metcalf are not able to

14 play audio independently and separately from one

15 another and also play the audio synchronously when   17:55:11

16 dynamically grouped together, correct?

17   A. I'm noting that that's one distinction

18 between Metcalf and the patent at issue.

19   Q. Now, if we look at the language of

20 claim 1 again -- sorry to make you jump back and   17:55:38

21 forth.

22   But claim 1 has two additional elements,

Page 165

1 correct?

2   A. Yeah. Limitations that I mark as (c) and

3 (d) on paragraph 49. Yeah.

4   Q. And claim element 1(c) essentially

5 requires that the independent playback device be   17:56:10

6 able to adjust its volume in response to a

7 player-specific input, correct?

8   A. That's what it says.

9   Q. And then claim element 1(d) requires that

10 the independent playback device be able to adjust   17:56:31

11 its volume in response to a group level input,

12 correct?

13   A. That's correct.

14   Q. And the independent playback device's

15 ability to adjust its volume in response to   17:56:46

16 individual and group-wise volume-control inputs

17 was important to distinguishing the prior art

18 during prosecution, correct?

19   A. Yes. It was important in the distinction

20 over Isely.   17:57:04

21   Q. Okay. Let's turn to paragraph 35 of your

22 declaration, which is Exhibit 3.

42 (Pages 162 - 165)

Page 166

1   A. Yes.

2   Q. And this begins the discussion of the

3 prosecution exchange that happened between Sonos

4 and the examiner regarding Isely, correct?

5   A. Yes.   17:57:39

6   Q. And on August 20th, 2013, Sonos and the

7 examiner had a telephonic interview in which they

8 discussed Isely, correct?

9   A. That's what it says.

10   Q. Do you see where you quote that the   17:57:53

11 examiner's summary states that the participants,

12 quote, discussed support for the independent

13 operation of the claimed individual player and, in

14 parens, Sonos, closed paren, distinguished the

15 individual operation over the tethered or   17:58:08

16 interdependent operation of Isely?

17   A. I do.

18   Q. Do you have an understanding of what the

19 tethered or independent [sic] operation of Isely

20 was?   17:58:22

21   A. It's not clear from the written record.

22 I can only speculate that it perhaps refers to the

Page 167

1 interdependent control of volume because that was

2 the basis upon which Isely was overcome, but I'm

3 not certain.

4   Q. Okay. The examiner did specifically

5 state that Isely controls volume in an   17:58:50

6 interdependent manner, correct?

7   A. Correct.

8   Q. Is there a -- do you have an

9 understanding of what the word "tethered" means in

10 the examiner's summary?   17:59:07

11   A. The examiner doesn't, you know,

12 explicitly say other than the basis for allowance

13 draws one to the conclusion that it is based on

14 volume being -- the inability for volume to be

15 independently controlled.   17:59:36

16   Q. Now, I think, as you discussed earlier,

17 Sonos' response was that Isely does not disclose

18 or suggest independent playback devices, correct?

19   A. That's what Sonos said. Yes.

20   Q. And then in paragraph 36 of your   17:59:59

21 declaration you discuss the examiner's issuance of

22 the notice of allowance, correct?

Page 168

1   A. Yes.

2   Q. And the examiner found that Isely, quote,

3 is enabling for an individually addressable

4 independent playback device, close quote, but

5 acknowledged that Isely does not teach the claimed   18:00:23

6 functionality of, quote, group-wise and individual

7 control of each of the group-wise addressable and

8 independently addressable playback devices, close

9 quote, correct?

10   A. That's what it says, yes.   18:00:35

11   Q. And part of the examiner's reasoning was

12 that Isely controls volume at -- in an independent

13 manner, correct?

14   A. Yes. That's required by the claims.

15   Q. I want to ask you a question. The   18:00:50

16 examiner refers to group-wise addressable and

17 independently addressable playback devices,

18 correct?

19   A. That's the term they use.

20   Q. Now, in the '949 patent, all of the   18:00:59

21 playback devices are independent playback devices,

22 correct? At least in claim 1, correct?

Page 169

1   It helps if you look at claim element

2 1(a). Do you see where it says, "and wherein each

3 player is an independent playback device"?

4   A. Yeah. In claim 1. Yes. Yes.

5   Q. So you would agree that the playback   18:01:38

6 devices of the disclosed invention are all

7 independent playback devices?

8   A. At least in claim 1, which is the claim I

9 focused on.

10   Q. Okay. So and in claim 1, the independent   18:01:49

11 playback devices have to be group-wise

12 addressable, correct? They have to respond to a

13 group-level input for volume control?

14   A. They do. I'm not certain about the

15 language "group-wise addressable." That was   18:02:09

16 language from the patent examination. But I would

17 agree it requires group-wise -- an individual

18 control of volume, and that's what the claims

19 require.

20   Q. Do you have any reason to believe that   18:02:22

21 the examiner was referring to playback devices

22 that wouldn't be covered by claim 1?

43 (Pages 166 - 169)

Page 170

1   A. Are you asking by using the

2 term "addressable" is --

3   Q. Yeah.

4   A. What are you asking --

5   Q. For the group-wise addressable and   18:02:49

6 independently addressable playback devices

7 referred to by the examiner, the examiner was

8 referring to playback devices of the disclosed

9 invention, correct?

10   A. That's correct. I mean, they're   18:03:01

11 referring to playback devices as required in

12 claim 1 --

13   Q. And --

14   A. So I have no reason to -- this is, I

15 mean, the basis for allowance and they must be --   18:03:10

16 they must be reading it on that.

17   Q. I apologize, I did not mean to cut you

18 off.

19   But again, as we discussed, all of the

20 playback devices in claim 1 are independent   18:03:24

21 playback devices, correct?

22   A. To meet claim 1, they have to be

Page 171

1 independent playback devices. That's the plain

2 claim language.

3   Q. So do you believe it would be a fair

4 reading, then, that the group-wise addressable and

5 independently addressable playback devices   18:03:41

6 referred to by the examiner are also independent

7 playback devices?

8   A. Yes, I do.

9   Q. I apologize, give me just one moment.

10   A. I'd like to clarify my previous answer,   18:04:39

11 just in case we crossed wires here. That -- I'm

12 not necessarily having an opinion whether Isely

13 discloses independent playback devices based on my

14 construction, but rather that the examiner, I

15 mean, had an opinion, I have no opinion, but it's   18:04:56

16 that it fails to meet the limitations that are

17 there.

18   Q. Understand. And I appreciate the

19 clarification.

20   MS. HOECHERL: Let's go ahead and take   18:05:20

21 just a five-minute break. I'm close to being

22 done, but I want to make sure that I have looked

Page 172

1 through all of the questions.

2   THE WITNESS: Okay.

3   VIDEO TECHNICIAN: Stand by.

4   We are going off the record. The time on

5 the video monitor is 3:05 p.m.   18:05:36

6   (A recess was taken.)

7   VIDEO TECHNICIAN: We are back on the

8 record. The time on the video monitor is

9 3:12 p.m.

10   MS. HOECHERL: Thank you, Dr. Weissman   18:12:54

11 for your time. I have no further questions.

12   THE WITNESS: Thank you.

13   MR. DE BLANK: I have no questions.

14 Thank you.

15   VIDEO TECHNICIAN: Are we concluded?   18:13:04

16   MR. ZIVOJNOVIC: I actually have a couple

17 of recross questions.

18   FURTHER EXAMINATION BY COUNSEL FOR RESPONDENTS

19 BY MR. ZIVOJNOVIC:

20   Q. If you could go to Exhibit 12. And I   18:13:11

21 could direction your attention specifically to

22 page 159 of the PDF.

Page 173

1   Please let me know when you're there.

2   A. I am there.

3   Q. Do you see at the top where it says, "To

4 use this feature to set up your network connection

5 in Windows 7"?   18:14:02

6   A. I see that.

7   Q. Windows 7 was released after Windows

8 Vista, correct?

9   A. You got me there. I don't remember the

10 exact ordering of releases.   18:14:16

11   Q. If you could go to page 6 of the PDF.

12   Do you see where this document has a

13 copyright date of 2011?

14   A. Yes, it does.

15   Q. Does this refresh your recollection of   18:14:57

16 whether Windows 7 came before or after Windows

17 Vista?

18   A. I don't recall the date of Windows Vista,

19 sitting here. Maybe we looked at that earlier and

20 I'm just not remembering.   18:15:22

21   Q. If you could go to Exhibit 11.

22   A. That's one that I can't --

44 (Pages 170 - 173)